American MILK REVIEW

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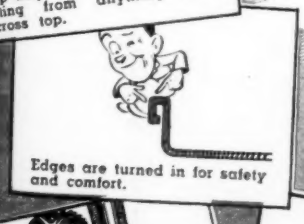

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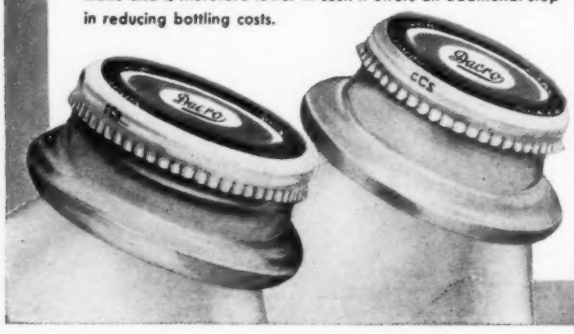

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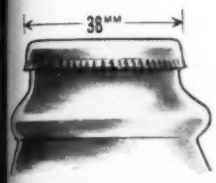

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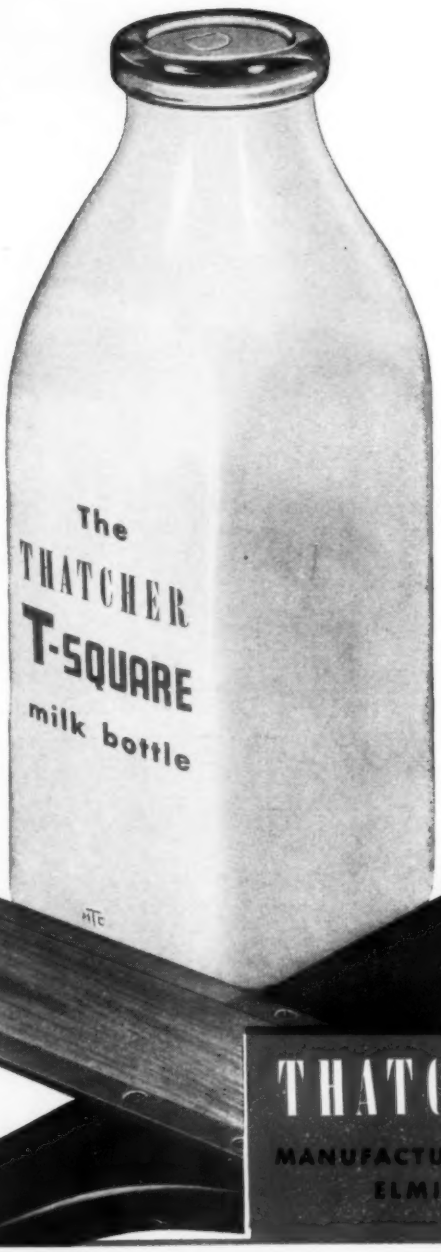

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American MILK REVIEW

VOLUME 9 - - AUGUST 1947 - - NUMBER 8

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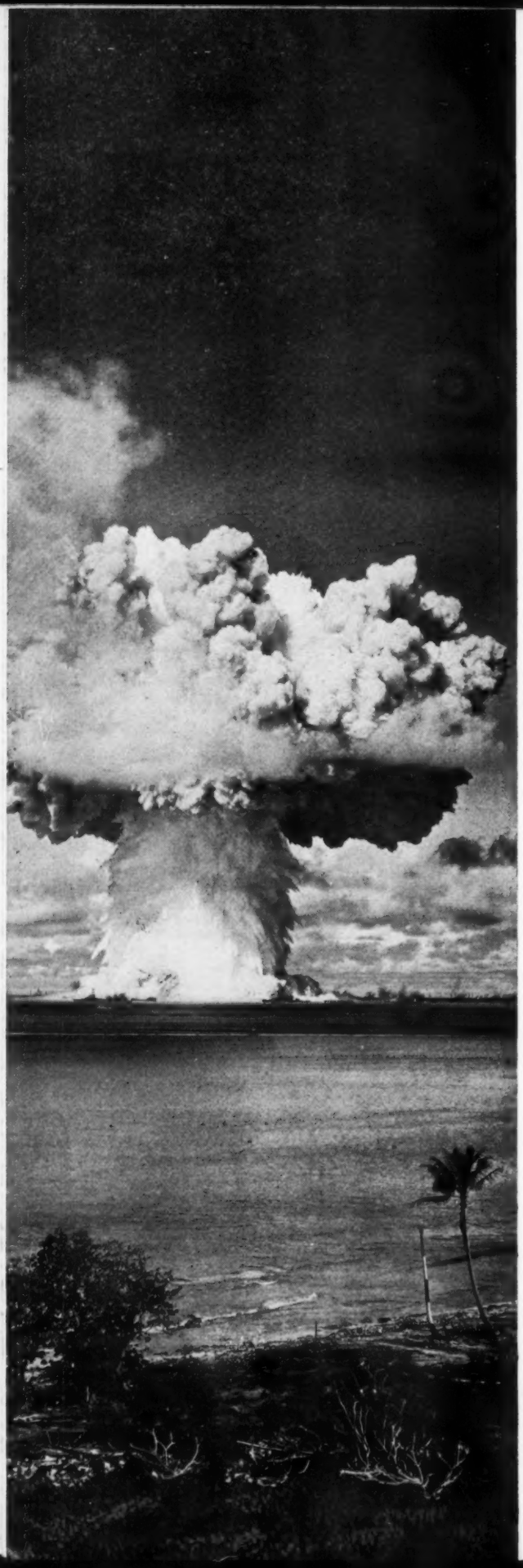

FOOD:

FROM A PURELY business standpoint the thought of more families buying more milk at fair prices is one to make dairymen happy. The same idea, extended to other basic foods as well as milk, is one of the foundations of the world's health, rosperity and peace.

In this atomic age, the world needs, even more than in the past, a pattern of international co-operation that will remove the threat of war and lay the groundwork for producing and distributing enough food for life and health for everyone. This would also stimulate modern industry and agriculture, and raise standards of living of both town and country people everywhere.

The nations of the world are increasingly conscious of the need for such a pattern, and are working toward it through the Food and Agriculture Organization of the United Nations. The work has been developing step by step, and important new advances will be considered by 48 nations meeting at Geneva on the 25th of August, when proposals for a World Food Council will comes before the FAO Conference.

The FAO Director-General, Sir John Boyd Orr, has himself been for years a practical farmer, and has devoted his life to bringing about the marriage of health and agriculture. In his early work in Scotland, he proved the importance of nutrition by carrying out a series of tests on Scottish school-children. These tests showed that when children who were supposed to be in normal health were given a pint of milk at school every day, their health and physique were remarkably improved, and their rate of growth was increased by about 20 percent. As a farmer, he believed that these particular nutritional needs could be supplied by increased production of milk through use of improved dairying methods. His belief is strikingly borne out by a recent example of the potential increases possible in milk production. In 1945, the milk production for the United States of America was 4,890 pounds per cow, as against 8592 pounds per cow obtained by farmers using the improved methods of the Dairy Herd Improvement Association.

The major project of FAO after its establishment in 1945 was a study of how well fed the people of the various countries were in a normal period, together with a comparison of the supplies actually available and the amounts that would have been needed to provide adequate diets. These facts and figures were needed in working out a world food program, and were based on the years before the war, because no other figures were readily available.

The first food given to any child is milk, which contains

IN A TROUBLED WORLD . . .

KEY to PEACE

by

RODNEY CHALK

all the elements of life needed for good health. The study undertaken by FAO suggested a desirable and reasonable consumption of whole milk fluid at about 360 pounds a year a head, or its equivalent nutritive value in terms of other milk products. In the United States, as in other countries where average milk consumption already is comparatively high, the goal would be to raise the level still further by increasing the use of milk by families who are not now getting all they need. Thus the 360 pounds a year is a sort of minimum yardstick. There is no suggestion that consumption in milk-drinking countries should be pushed back to that level or held there.

For much of the world, this minimum goal of 360 pounds is so far above prewar consumption that the figure has little practical meaning except to show the great future possibilities for increasing milk production and imports of milk products. This is true particularly in the Far East, where milk has been drunk formerly in only negligible quantities. Other types of food can be provided there more quickly to take care of health needs. So in estimating the world's nutritional needs for milk in the fairly near future, the desirable milk consumption in these areas was temporarily set at about 60 pounds a person a year. With these modifications, the FAO survey estimated the probable world needs of milk in 1960. Following the present trend in population figures, a 25 percent increase over the present world population was assumed to be more than likely. It would then be necessary for the world to produce in 1960 one hundred percent more milk than it did in the years before the war to obtain the desirable level of consumption.

The next step taken by FAO was to set in motion the machinery so clearly needed to increase world production. This is essentially a long-term problem, in contrast to current emergency efforts to alleviate postwar famine. At present the high producing nations undamaged by the war are turning out all the food they can. The deficit nations while they strive to restore production, are welcoming supplies sent from other lands. But when the countries damaged by war get back on their feet, the old problem of farm surpluses will return. Unless the nations can agree now on a sensible world food policy to foster production parallel with consumption needs, the chances are that the history of the 1920's will be repeated, and unsold food will pile up while people go hungry. To avert this

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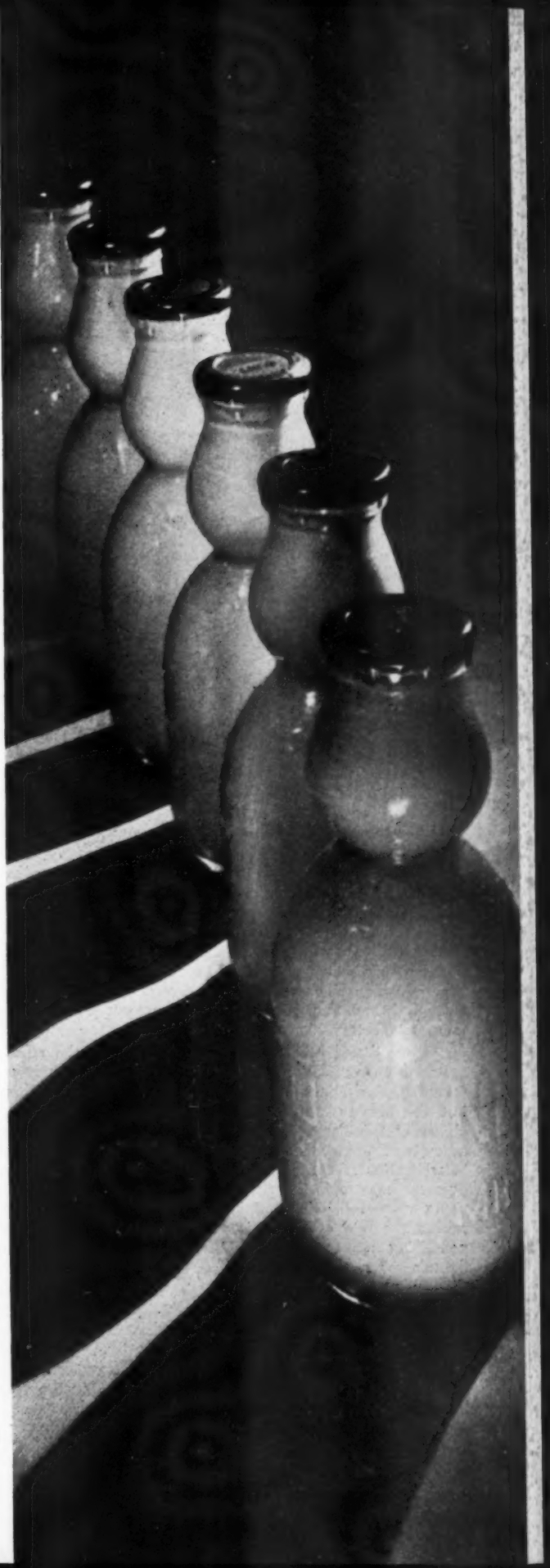

. . . TWO KINDS OF POWER

EDITORIALLY SPEAKING . .

Railroad Tariff Rise

THE struggle to keep ahead of rising costs becomes increasing grim with the recent proposal by the railroads that freight rates be increased. No one will deny that the returns to the carriers should be such as will encourage, under efficient management, the progressive development of service. There are, however, a number of points other than rate revision that deserve attention. These may be overshadowed by the proposal that rates on milk and cream be raised 25 per cent. But untitl the effects of the proposal for each commodity are estimated, the broader relationships deserve consideration.

The major premise that the carriers need a 6 percent return is not well chosen. The industry is an old, established one with little of the risk associated with comparatively high returns. Even more noticeably the railroads have made progress and rendered passable service on an average return during the past 25 years—according to their spokesmen—of about 3 per cent. The experience of the individual roads has varied. If one were to study the records, he would probably find that the Norfolk and Western, the Virginian, the C., B., and Q., the C. & O., possibly the Union Pacific and the Sante Fe may have had a return of six per cent or more. Similarly the Seaboard, the B. & M., the B. & O., the Northern Pacific and the Missouri Pacific had less than 3 per cent. A general rate increase will not solve the problem of the individual roads. If the increase is sufficient to enable the weak roads to earn 6 per cent, then the strong roads will earn substantially more than 6 per cent. The tendency to generalize the plight of a road like the "Pennsy" into an industry condition detracts from the weight of the argument.

Reasonable response to the proposal is further handicapped by lack of experience under the increase which became effective January 1, 1947. According to the Traffic World, June 28, 1947, net income of the railroads for the first four months of 1947 was estimated at $121,000,000 compared with a deficit of $100,000 for the same period in 1946. More should be known about the figures in order to evaluate them fully but they suggest that the present level of rates is more satisfactory than the old level.

Some attention also needs to be given to the effect on costs of modernization programs, especially the widespread acceptance of Diesel power. Here too experience is limited but the accumulating evidence is encouraging. The availability of Diesels has quickened the imagination of operating executives. Some have done so far as to anticipate complete "dieselization". Through this mechanical prima-donna, management may and is getting at the burdensome drag of a rising wage bill. Emphasizing cost-reduction as a means of raising the rate of return is not done with the intention of penalizing management. It is one way, provided service doesn't suffer, that meets with certain approval.

Finally, we cannot overlook the fact that when changes in freight rates are being considered, we have in mind an adjustment which, on the effective date, will mushroom the entire commercial and industrial structure. Current condition are not such as will encourage any supplier to absorb the increase. The amount of it will be added to the cost of living bill.

We might well observe one of the carriers' own signals:

"Proceed, with caution".

The Real Power

WHEN ATOMIC ENERGY is mentioned, men are inclined to forget the true base upon which civilization rests. The terrible destructive power of the bomb is too well known for comment yet the immediate destruction of a Hiroshima is no worse than the malignant misery of a great famine.

Civilization rests on a foundation of food. We have heard that "Food Will Win The War" and "Food Will Win The Peace." Possibly the slogans sound trite to us now. Slogans get that way. Nevertheless, the truth is there. It is not nuclear fission that will govern the fate of nations it is the success or failure of the corn crop, the rise or fall in the production of dairy products, these are the real power in the world of men, these are the realities of existence.

●

Design For Progress

JAQUES BARZUN, French born Harvard educator, pricks an academic balloon in his sharp little book *Teacher In America.* Particularly distasteful to Mr. Barzun is the type of research which he describes as little more than academic stamp collecting. Such is not the case, however, with the research program recommended by the Dairy Advisory Committee under the Marketing and Research Act of 1946.

The report itself is a stimulating document that kindles the imagination. The whole great panoply of the Industry's future from pasture to breakfast table reaches away in a dozen different avenues as the Committee's recommendations give practical direction to the dairy problems of the nation. One of the most encouraging suggestions included in the report concerns the "effects of government regulations—ascertaining the influence of local, State, and Federal governmental agencies and regulations on the structure and operation of fluid markets". The recommendation is encouraging not because it means an increase or decrease in market regulation but because so long as government and government agencies are willing to evaluate their worth by conscientious study of their effects on society so long will they be the servants and not the masters of the people they serve.

●

Regeneration

THE ABILITY OF LIFE TO perpetuate itself is one of the remarkable phenomena of this world in which we live. By a thousand different intricate devices the living things of the earth provide for the continuation of their kind. Long ago men learned that selective breeding was a major factor in the development of productive strains of plants and animals. The best cattle and the best grains were held back from the food markets and used as the parents of the next generation. The selective process is being applied in the Dairy Industry. Encouragement to excellence is found in a number of different quarters. The scholarship awards at the University of Illinois, are an indication that the Industry is employing the time proven principle of selection in preparing the next generation for participation in the dairy field.

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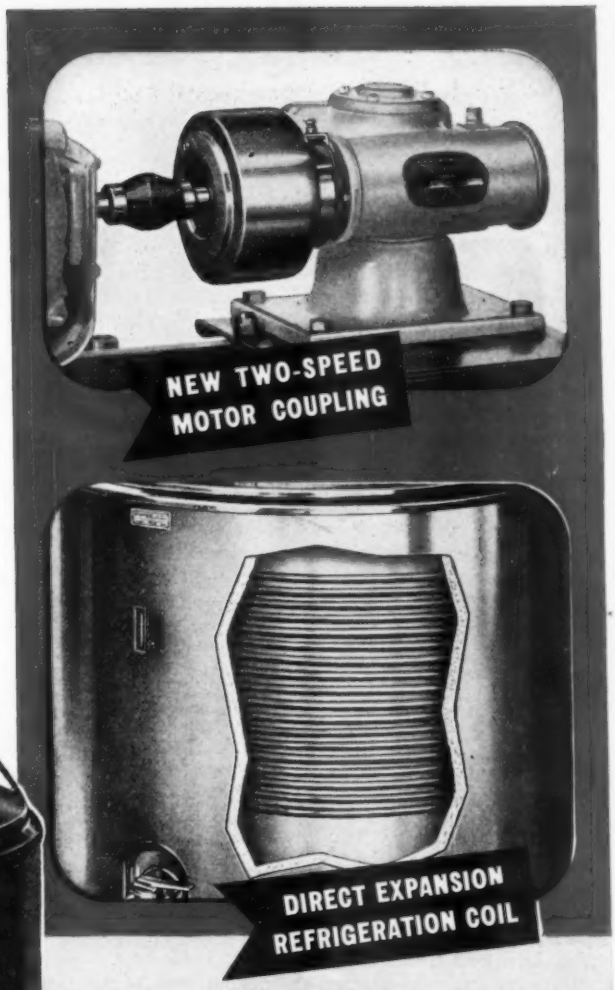

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Fitting Production to Consumption

Uniform Production Would Not Be An Unmixed Blessing Is The Opinion Of Samuel W. Tator Who Brings Some New Thoughts To Bear On Level Milk Production

S. W. Tator, present Chief of the Dairy Branch of the Production and Marketing Administration in the United States Department of Agriculture is well qualified to speak with authority on milk production. The requirements of his office demand a nationwide point of view which coupled with many years of valuable service in the Industry make his judgment's of more than ordinary import. This is the second of a series of opinions on the problem of level production. A third will follow next month.

THE PROBLEM of adjusting milk production to consumption is one about which much has been said and to which many specialists in milk production and marketing have given considerable attention. For various reasons, such as the seasonal production of feed and the physical characteristics of cows, milk production varies throughout the year. Normally more milk is produced in May and June than in October and November. Although the consumption of milk varies too, it generally does not change as much from season to season as does production. For this reason we have come to have what is called the "spring flush" and the "fall famine."

More attention has been focused on this problem during the last five years than previously, partly because shortages in the fall have made more people aware of this problem. During the years of depression, there was always a surplus of milk produced in relation to milk consumed in many of the fluid milk markets. Although production varied and supplies were not as great in October and November as in May and June, there was still more milk available than was consumed as fluid milk. During the war, fluid milk consumption increased tremendously. In some markets, supplies of milk were less than demand throughout most of the year and in most markets there were severe shortages for a few months in the fall. In order to have adequate supplies of milk, some of the milk sheds were expanded. This in turn increased the amount of milk in excess of fluid requirements during the spring.

For the country as a whole the change in the seasonal pattern of milk production during the war was not great. In fact, if total milk production is considered, the change was almost negligible and certainly much less than would be expected under the pricing policies followed during the war. This was probably due in part to the production payment program which provided for higher payments during the fall and winter months than during the spring and summer. However, in some of the fluid milk markets the pattern of production changed so that a greater proportion of the milk was produced in May and June than formerly.

In considering the question of a desirable seasonal pattern of production and the means of bringing it about, it is first necessary to differentiate between the two general uses for milk, that is, milk for fluid consumption and milk for manufacturing dairy products. A large number of cities require that milk which is sold for fluid consumption must be produced under specific sanitary standards which are in general considerably higher than those in effect for the production of milk for manufacturing uses. In many instances, regulations for producing milk for fluid consumption require producers to make capital investments and to incur costs in excess of those required when milk is produced for manufacturing purposes. The producer, of course, must be compensated for these additional costs. When more milk is produced at this higher cost than is required for fluid consumption, the excess is normally used for making dairy products. The producer in effect, after incurring these costs, is required to sell that part of his milk which is not needed for fluid consumption at a price which does not reflect these additional costs. Although a producer may be needed in a market for only a few months, he nevertheless continues producing milk throughout the year. The greater the variation in production, the greater the amount of milk in excess of fluid requirements during the flush season. In a fluid market which is not equipped to process milk into products economically, it is obviously not a good use of resources to produce more milk than is needed for fluid consumption.

In the production of milk for manufacturing uses, the problem is different. The usual practice has been to produce more dairy products during the spring and summer than are consumed. The excess is placed in storage for consumption during the fall and winter. It is, therefore, not at all clear that the advantages of a uniform seasonal production in fluid milk markets would apply in manufacturing areas. In fact, there is some evidence that seasonal variation in production in manufacturing areas is desirable. As a general principle it is better to produce a storeable commodity during the period when production costs are lowest. It is likely that it is to the advantage of a producer to concentrate on milk production during certain periods of the year when production conditions are particularly favorable. Factors to be considered are the availability of pasture and feed, the use of labor in conjunction with the production of other crops, the use which can be made of skim milk in raising livestock, and the cost of transportation. An additional factor is the quality of the products produced during certain seasons of the year. Milk produced by cows fed with grass is often considered more desirable for producing certain dairy products, particularly cheese. While the producer of manufacturing milk has these factors to consider, he does not need to take into consideration the demand for his product in the same sense that a producer of fluid milk is required to do.

Although most people will agree in principle that the pattern of the production of fluid milk should be adjusted more nearly to the requirements of consumers, considerable difference of opinion develops when attempts are made to put the principle into practice. The most effective method of encouraging farmers to produce more milk in the fall is to make such production more profitable. Again most people will agree that milk prices should vary seasonally in order to encourage producers to provide a more uniform supply of milk. Unfortunately, however, seasonality in milk pricing means that producer prices must be lowered in the spring. When the time comes for lowering the price, there are always arguments advanced to show that although seasonal pricing is satisfactory in principle, this is not the proper time to put it into practice.

In the pricing of milk under Federal orders, the problem is being handled by providing for greater returns to producers in the fall than in the spring. There have been several methods followed, all of them designed to solve this problem within the framework of regulations. The selling of milk on

(Please Turn To Page 43)

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Professor J. H. Frandsen Retires

Pioneer Editor, Teacher, Ends Active Participation as Dairy Department Head — Served Industry From Coast to Coast

Professor Julius H. Frandsen, Head of the Department of Dairy Industry at the University of Massachusetts, pioneer advocate and first editor of the *Journal of Dairy Science* retired from active service at the close of the recent academic year.

Professor Frandsen graduated from Iowa State College in 1902 and began his career of scientist, journalist, and teacher as an Assistant in Agricultural Chemistry at Iowa. In 1904 he went to Portland, Oregon, to serve three years as a dairy chemist with the Hazelwood Creamery Company. There followed four years as Professor of Dairy Husbandry at the University of Idaho and ten years as Head of the Department at the University of Nebraska. For three years he served as Dairy Editor and Counsellor for the *Capper Farm Press*, In 1926 Professor Frandsen came to Amherst, Massachusetts to head up the Animal and Dairy Husbandry departments of what was then the Massachusetts Agricultural College.

J. H. Frandsen

The American Dairy Science Assn. paid tribute to Prof. Frandsen's efforts in 1942 with a scroll which said in part, "In recognition of outstanding service to dairy science in America, particularly in the conception, advocacy, and establishment of the *Journal of Dairy Science*." Prof. Frandsen pioneered in many fields. He wrote the first text book on the Manufacture of Ice Cream and Ices. He was using the radio as early as 1924 to bring the message of healthy herds and quality dairy products to the Industry and the consumer. He saw midwestern railroads as a tool for improving dairy conditions and urged railroad officials to develop a program of dairy improvement, particularly in Nebraska. During the first World War he was chairman of the Dairy Food Commission under Herbert Hoover and in 1931 he was a delegate to the World Dairy Congress in Copenhagen. He was instrumental in organizing the New England Association of Milk Dealers in 1935 and the establishment of a central cooperative sales agency for marketing Nebraska dairy products and creating national brands a decade earlier. His publications, begin with the Babcock Tester and end with the promotion of ice cream as a food.

Listed in Who's Who and American Men of Science, honored by a number of dairy organizations, Emeritus Head of the Department of Dairy Industry at the University of Massachusetts, Professor Frandsen brings to a close the formal phase of a career that has literally spanned the continent.

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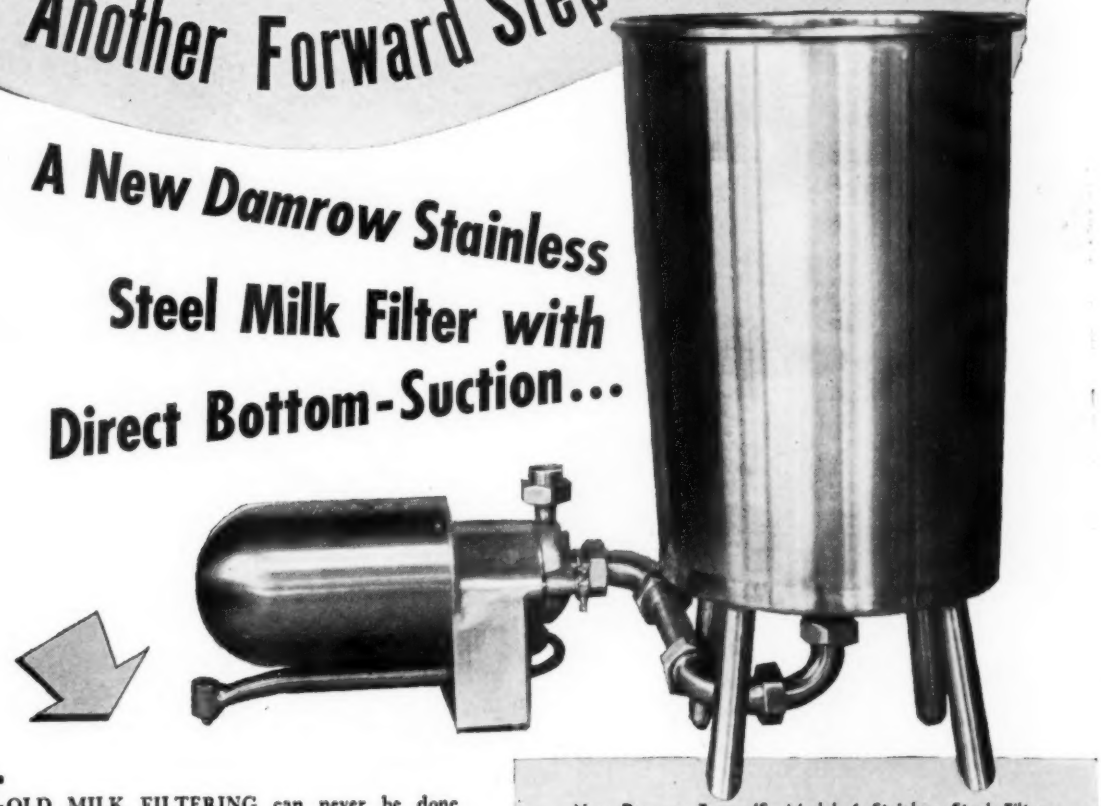

New Damrow Type JS, Model 4 Stainless Steel Filter. Capacity, 5,000 lbs. Other models available: Type F, 10,000 lbs., and Type A, 15,000 to 25,000 lbs.

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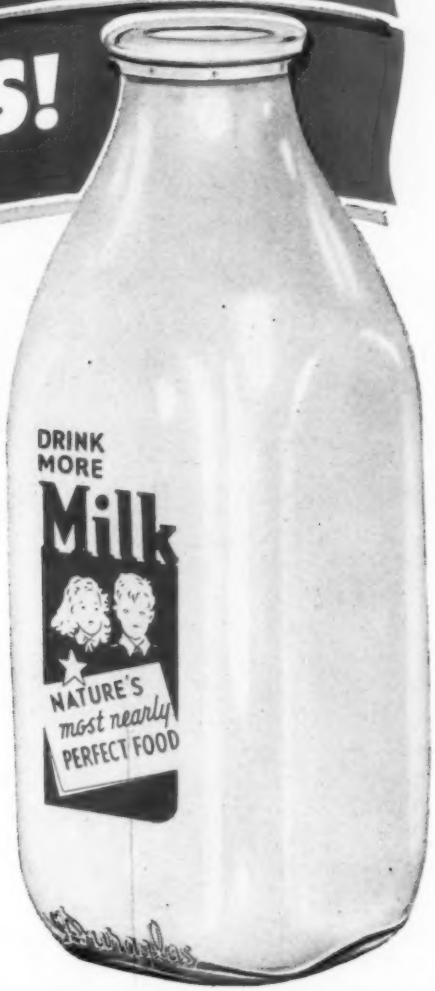

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RESEARCH REPORT

Research, like a woman's work, is never done. The report of the United States Department of Agriculture Dairy Advisory Committee on Dairy Research under the Research and Marketing Act of 1946 devotes fifty-nine stirring pages to a consideration of the course dairy research should take. The report, issued last month, prefaces its discussion with a mild statement that, like a pleasant highway, leads one on to a multitude of intriguing fields.

"Dairying," the report says, "is the most stable enterprise in American agriculture. It has experienced steady, consistent growth providing an expanding population with a higher proportion of total nutritional requirements and farmers with a larger income. Although the point has been reached where fully one-fifth of the American diet and one-fifth of the farm income are derived from dairy cattle and their products, the dairy industry has not exhausted its potentialities for growth and service. Research can contribute to further development of dairying, particularly from the standpoint of improving its efficiency and thereby maximizing its contributions to national welfare."

"Research," the report declares, "must be as broad as the industry itself," and "A sound dairy industry must be based on cows capable of producing milk and butterfat efficiently." To substantiate the contention that further research is needed in dairying, comparisons between the production in other agricultural commodities and dairying are made. Over a twenty-year period potato production has increased in bushels per acre by 49.3 percent, corn by 32 percent, eggs in number per layer by 26.9 percent, while butterfat in pounds per cow has increased only 10.7 percent and milk 9.2 percent.

The Dairy Advisory Committee suggests fields of research that begin with the farm and end with the consumer which to our way of thinking pretty much covers the subject. Specific recommendations include investigations dealing with herd health, dairy cattle breeding, animal nutrition and feeding, utilization of the nonfat portion of milk, organization of markets and merchandising, dairy waste disposal, market news, seasonality of milk production and marketing, consumption of milk and dairy products, methods of price determination, and effects of government regulations.

The most striking suggestion contained in the report deals with the relation of price to the consumption of dairy products. "Much more needs to be known about about the responses of consumers in different income classes to small changes in the price of fluid milk, or about the substitutability of cheaper forms of milk at various price levels." The nation and indeed the world stands in need of a wider consumption of milk in fluid form and of other dairy products. In many ways this problem of under consumption has all the earmarks of being the key to much of the world's unrest. While we cannot be so naive as to hold that improvement in this phase of society will usher in the millenium we do know that the elemental forces of human existence are tied up with the quest for food.

The report concludes with some observations on the necessity for increased educational and extension work. "The continued existence of antiquated practices and methods—exemplified by cows with only 150 pounds annual butterfat production, gravity separated cream, unpasteurized milk, mite infested warehouses, condemned food products, and wasted skim milk—suggests the need for persistent, effective educational work."

The report has received widespread attention and although it is early for a final evaluation there is little doubt that the document will give a definite direction to an important segment of the industry.

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THE STORY OF A MILK TRAIN

by

HENRY DOHERTY

NEW YORK CENTRAL RAILROAD

Daily to the 10,000,000 inhabitants of the meropolitan district of New York City flows more than one million gallons of milk from the city's great milkshed, which extends into the states of New York, New Jersey, Pennsylvania, Vermont, Connecticut, and Massachusetts.

Such a tremendous flow of milk has necessarily created an important transportation business all of its own. New York Central's stake in this traffic, handled by its Milk Service Department, is almost 25 percent of the total, producing a gross revenue of more than two million dollars annually to the railroad.

The first known instance of carrying milk by rail to New York City occurred in 1842, when the New York and Erie brought 60 gallons from Orange County, N. Y., in a churn in the baggage car of a passenger train. The operation proving a success, shipments increased until the following year that railroad carried more than 1,000,000 gallons to the New York market. Meanwhile the New York Central and other railroads entered the field of transporting the commodity.

All milk was shipped in cans, which varied in size from 5 gallons to 15 gallons until standardization was achieved with a 10 gallon can. To handle the traffic the railroads furnished insulated cars, equipped for high speeds in passenger trains. During summer months ice was packed on the cans to prevent souring.

As the city's population grew and the demand for milk increased, solid milk trains were inaugurated in daily runs, the first being operated by the New York, Ontario and Western on February 1, 1871.

The next important step in railroad milk service was the construction of the first tank car in 1903. Early tank cars consisted of a glass-lined tank housed within an insulated car. More recently constructed tank cars have a stainless steel inside tank insulated beneath a streamlined exterior. Further development in this type of car provides for removal of the tank both at country milk station and at city terminal yard.

Use of the tank car elminates the labor of moving cans, both in the country and in the city, and of packing the cars with ice. Instead, pre-cooled milk is pumped into the tanks at milk stations, then pumped from them to tanks on trucks in the city, and thus moved to pasteurizing plants.

At present, 73 percent of the equipment operating in New York Central milk trains are tank cars, totalling 150 as compared with 70 can cars. They are privately owned and have a capacity of 6,000 gallons. The can cars are owned by the railroad. All cars are equipped for high-speed service. When operated in solid trains specially-built, heavy rider cars carry the train crew on the rear end.

Train Load of Milk. A variety of milk car types can be seen in this solid milk train, one of four the New York Central operates each day.

Today the New York Central brings four solid milk trains daily into the metropolitan area. Three carry milk from the counties along the Mohawk Valley and from counties north and west of the Adirondacks to Lake Ontario and the St. Lawrence River. They terminate in the 60th Street Milk Yard on the West Side in Manhattan. The fourth train carries milk from the Catskills and runs down the River Division (West Shore) from Kingston to Weehawken, where it terminates at a special milk yard there.

Not all the cars in these trains are collected from stations in the milkshed by the Central. Those arriving from the greatest distance are collected by the Rutland Railroad, beginning at Lisbon, N. Y., and are delivered to the Central at Chatham, N. Y., to be brought into New York City. Other cars are collected south of the Mohawk Valley by the Delaware & Hudson Railroad and delivered to the Central at Albany, where they are combined with other cars and hauled down the Main Line to the city.

Collection of milk cars from the most distant points of hauling begins at approximately 8 o'clock in the morning. By this time farmers have made their deliveries to receiving stations at railroad sidings and the milk has been tested, weighed, and loaded into the cars, which were spotted on the sidings during the night or previous evening.

Pick up of these cars from station to station toward a final assembly point is made by local trains during the day. Some of these collecting trains also give passenger service.

The solid trains of assembled milk trains generally begin their runs to New York City late in the afternoon, arriving at destination during the night. Unloading of cans and tanks immediately follow so that the return movement of cars can begin during the morning and individual cars spotted at milk station sidings in the country that night. This establishes, where possible, a two-day cycle for each car.

The longest haul of a milk car on the New York Central starts from Massena, N. Y., 410 miles from the 60th Street Milk Yard in New York City. Train 16 on the St. Lawrence Division originates here every morning at 7:50 to run to Watertown, picking up cars enroute.

Of course the exact itinerary of a milk train changes from day to day accordinng to geographical variations in the milk supply. Also during the flush period the points at which cars are picked up differ from those that prevail during the short period. Train 184, however, furnishes a fairly typical example of a milk train.

It starts from Massena with one can car. It adds an-

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other can car at Norwood, off the Norwood & St. Lawrence Railroad; then another can car at Potsdam. At Canton it picks up one or two tank cars, depending on the day's supply; at DeKalb a tank car off the DeKalb Branch from Heuvelton; at Gouverneur a can or tank car; at Antwerp a cheese car; at Philadelphia a local tank car, plus another tank car from Douglas Crossing and a can car from Lafargeville, off the Clayton Branch; at Evans Mills a can car. Arriving at Watertown a local tank car is picked up, in addition to another from Limerick and Cape Vincent, off the Cape Vincent Branch, and one from Black River.

The cars leave Watertown for Utica in Train 70, which carries passengers in two added coaches and stops for only one further collection of milk cars at Richland.

The cars at Richland were assembled there by a Milk Extra which operated out of Watertown at 8 a. m., some hours ahead of train 70. This train picked up a can car at Adams Center; at Adams two tank cars; at Pierrepont Manor one can car and at Lacona one tank car. These are coupled together at Richland with two tank cars picked up off the Oswego Branch at Pulaski, in a special movement by an engine crew.

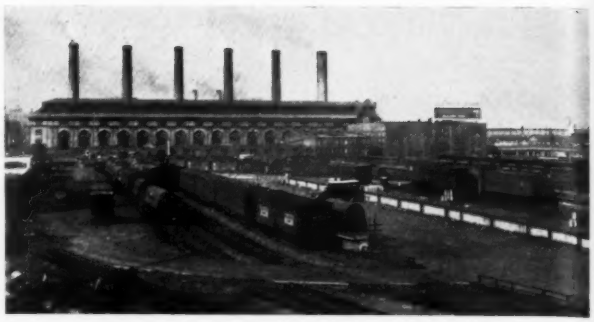
Train 70 arrives at Utica to be combined with Train 64 which has meanwhile collected 10 milk cars off the Utica-Carthage Branch, leaving Carthage at 9:50 a.m. It is at Boonville on this branch that the demountable, or slide-off, tank is used. A tractor and trailer unit takes the tanks from the car to West Leyden, 10 miles off the line, where they are loaded at a milk station more convenient for farmers' delivery. The tractor and trailer then returns the tanks to the car on the rail siding at Boonville.

The combined train, now No. 184, out of Utica, with an added car from St. Johnsville and another from Middleville, departs at 5:05 p.m. Stopping at Fort Plain to pick up a last car, it runs with 34 cars to Rensselaer for a change of crew and service. It then speeds to New York City, with a stop at Harmon to change to electric power.

At Spuyten Duyvil one tank car is dropped to be moved to the Bronx Terminal Market. The next stop is the 130th Street Milk Yard on the West Side to drop cars billed there. Its destination is the 60th Street Milk Yard, where approximately 50 percent of the cars are delivered. It ends its run at 11:30 p.m.

A second milk train originates as Train 188 at Syracuse at 8:41 a.m. It runs over the West Shore, doing some freight work besides picking up 5 to 6 cars between Syracuse and Albany.

In the Rensselaer yard these cars are combined to make



60th Street Yards in New York City. Milk from a six State milk shed is picked up here and carried by trucks to plants in other parts of the city. Some companies have private sidings at the plant where tank cars can be unloaded through sanitary pipe directly into the holding tanks.

up Train 182 with milk cars collected by the Oelaware & Hudson Railroad from as far west as Harpursville and as far north as West Chazy. With an average of 20 cars daily, it runs down the Hudson Division to reach its final terminal at 60th Street at 12:20 a.m.

The Rutland Milk Train, originating Odgensburg on the St. Lawrence River and picking up cars from northern counties, runs down over the Rutland Railroad through Vermont to be delivered to the Central at Chatham, N. Y., with a daily average of 20 cars. It then rolls down the Harlem Division, crossing over the "wye" at Mott Haven Yard to drop one car at the Bronx Terminal Market, others at 130th Street and end its run at 60th Street, where it is due at 3:20 a.m.

The fourth milk train originates as No. 528 on the Catskill Mountain Branch of the West Shore at Oneonta. Besides picking up 7 or 8 milk cars, No. 528 also gives passenger service between Oneonta and Kingston. Out of Kingston it is operated as a Milk Extra to Weehawken Milk Yard, arriving at 8:00 p.m. At this point the cars are unloaded to milk trucks which use the 42nd Street Ferry in trips between the cars in Weehawken and the pasturizing plants in New York City.

These four trains account for all but 5 cars which are loaded at separate points off the runs of regular collecting trains and are brought to the city in passenger service. These are cut off at Harmon for West Side pulls and arrive at 60th Street Milk Yard during the night.

The reverse movement of the milk cars begins within a few hours after their arrival.

First out are the Catskill Mountain Branch cars, scheduled to leave Weehawken at 1:00 a.m. Then the West Shore

(Please Turn To Page 42)

A hybrid development in railroad transportation of milk is the slide-off tank car. The necessity of pumping milk from car to truck in order to unload is eliminated in favor of transferring the entire tank. The sequence of pictures shown above illustrates the process of shifting a tank. 1. The trailer truck prepares to load the tank. 2. Loaded truck pulls up alongside flat car. 3. Tank is transferred to car. Cars and tanks are owned by the milk company.

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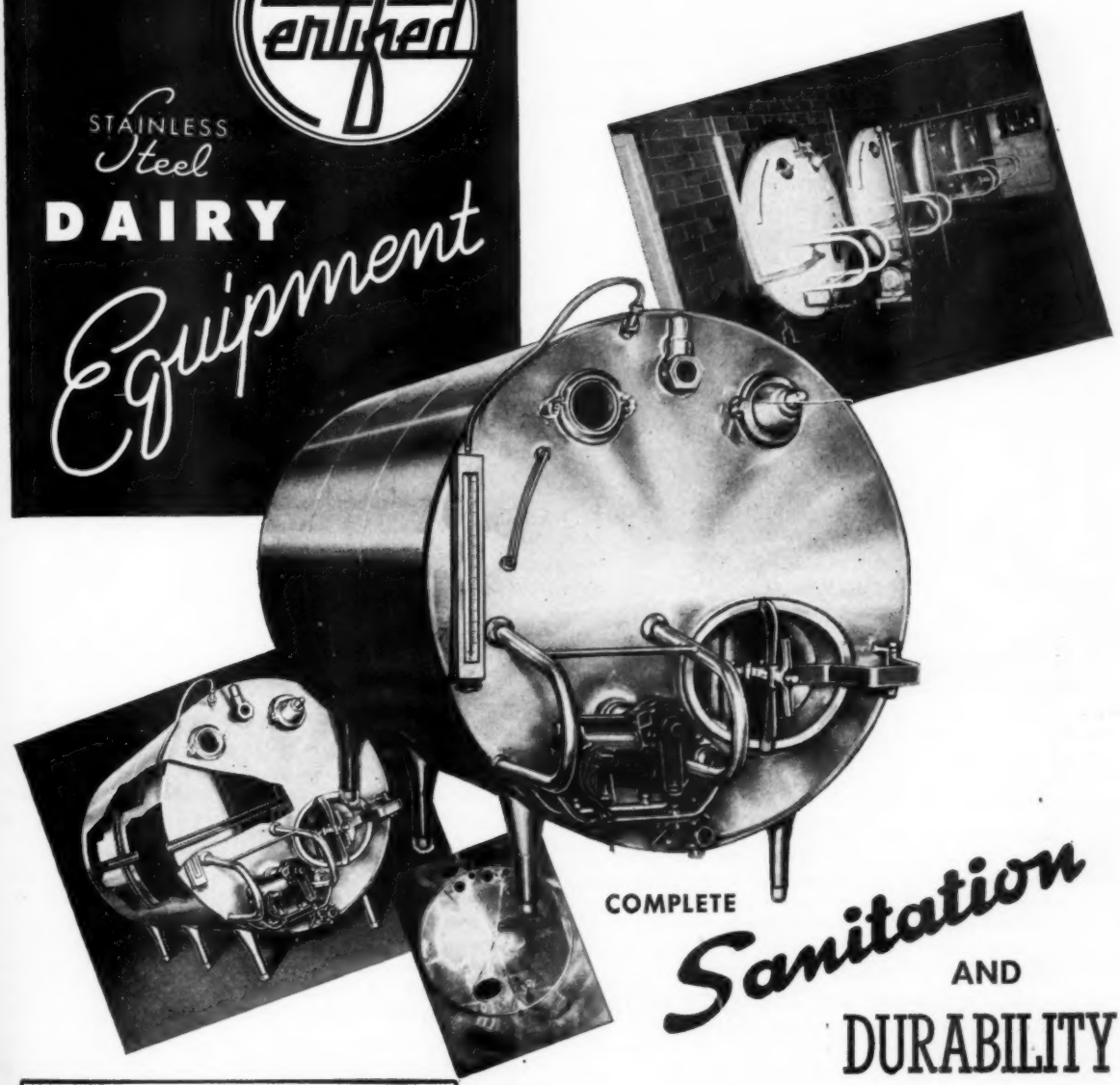

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LABOR-MANAGEMENT RELATIONS *under the* TAFT-HARTLEY LAW

Rights and Obligations for Employer and Employee Alike Have Been Altered by the Nation's New Labor Law Declares Philip L. Gamble Yet Years Must Pass Before the True Meaning of the Measure Will Be Known

Philip L. Gamble has done both labor and management a service with his practical explanation of a complicated law. As Head of the Department of Economics and Government and Acting Head of the Department of Business Administration at the University of Massachusetts, he is no stranger to the problems of the market place. He has served as a private mediator in Massachusetts and Connecticut labor disputes and during the War was a member of the War Labor Board. He is a graduate of Wesleyan with a Ph.D from Cornell. Out of seven busy days a week he manages to find time to help a charming wife bring three young Gambles along the well traveled highway.

THE "LABOR MANAGEMENT Relations Act, 1947", known as the Taft-Hartley Bill is the first legislation dealing with federal regulation of labor relations since the passage of the Wagner or the National Labor Relations Act of 1935. This new law may be looked upon as an addendum modifying the older law in a new effort to establish justice in industrial relations.

We can assume that the major provisions of the Wagner Act and their applications are well known to employers in the Dairy Industry. Their primary present interest is in the new law whose final import will not be known until there has been a long period of testing in the courts combined with efforts to modify the law by bargaining in the shops and amendments in the legislature.

The Taft-Hartley Bill contains so many provisions that mere listing is a lengthy process. It changes the Wagner Act, first of all, by enlarging the National Labor Relations Board from three to five members and removing from the Board the necessity for handling administrative detail. This converts the Board into a labor court with an administrative executive called a General Counsel.

The provisions applying to the National Labor Relations Board, the General Counsel, and unfair labor practices by employees become effective within sixty days. Also deferred until August 22nd are the provisions outlawing the closed shop, regulating the union shop, requiring registration of data by unions, depriving unions with communist officers of their rights under the law and forbidding foremen a recognition by law of their bargaining organizations.

The other sections of the Taft-Hartley law become effective at once. They include the following: Creation of a new statutory federal mediation service to replace the present conciliation service in the Department of Labor; emergency machinery for handling "national–paralysis" disputes or strikes which "imperil the national health or safety"; stability of unions; regulation of welfare funds and check-offs; banning of strikes by government workers; appointment of a joint Congressional Committee to study labor management relations and to observe the workings of the new law.

The law also abolishes the review section, comprising about 300 lawyers of the old NLRB. This section had "pre-digested" all the records for NLRB members but had been attacked as unduly "influencing" its chiefs.

Under the new law the task of reviewing each case will now be vested with the Board members who may be expected to increase their own legal staff. It has been argued that this step will slow up administration and impair Board efficiency, but proponents of the law maintain that it would expedite the Board's work.

The closed shop union shop section of the new law affects some seven million employees and has been the subject of much controversy and full page newspaper advertisements by the A. F. of L. favoring the closed shop. The closed shop (in which an employee must be a union member to obtain a job) is outlawed, while the union shop (in which an individual may be employed even if he is not a union member but must become one after a trial period) is hedged about with certain restrictions.

In order to qualify for the union shop a labor organization must be the representative of the majority of all of the employees. It must also be certified by the NLRB that the employees, by a majority of those eligible, have signified their desire to have the union shop. Only then may the union ask for it. If, however, the employer agrees to this request, the union will be unable to dismiss anybody for any reason other than for failure to keep up dues payments. Thus, in the eyes of certain labor union leaders and others of the bill's opponents, the usual reasons for the union shop including the union's right to discipline recalcitrants, spys, provocateurs, et cetera, would no longer apply.

Ample testimony before Congressional Committees seems to indicate the need for this section of the law whose frank purpose was to deprive union leaders of some of their former prerogatives regarding the disciplining of union members. Testimony showed that the leaders had on more than one occasion abused this power and had unduly deprived employees of jobs by removing them from the membership rolls.

One of the most interesting sections of the new law deals with unfair labor practices of employees to match the sections detailing unfair practices of employers found in the Wagner Act. These new provisions met strong opposition during the consideration of the bill The new law provides for the following six "'unfair" labor practices by labor organizations:

(1) Restraining or coercing employees in the exercise of their guaranteed rights or employers in the selection of their bargaining agency; (intended to prevent unionization by force and to stop unions from compelling employers to bargain either as individuals or as members of larger units);

(2) Persuading or attempting to persuade employers to discriminate against an employee, unless in accordance with the law; (the limited union shop action);

(3) Refusing to bargain collectively; (to stop unions from serving ultimata on employers);

(4) Conducting strikes or boycotts for various purposes which are stated in some lengths; (the aim is to lessen jurisdic-

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tional disputes, secondary boycotts and strikes against NLRB certification);

(5) Requiring initiation fees which the NLRB finds "excessive or discriminatory"; (to meet the charge that unions keep out qualified workers by excessive charges);

(6) Causing or attempting to cause an employer to pay money for services which "are not performed or are not to be performed"; (to offset "feather bedding" practices).

Some believe that these labor practices furnish the heart of the first section of the new law and may change the entire course of industrial relations. Unquestionably President Truman was referring to these provisions among others when he declared in his veto that the new law was administratively impossible to enforce.

Since the passage of the Norris LaGuardia Anti-Injunction Law, unions have been free from restraining action by the Courts until last year's controversy between the United Mine Workers and the Federal Government. There we saw that the Government in contrast to private employers was able to get an injunction against the United Mine Workers under which the Union was subsequently required to pay damages for contempt of Court. Under a new provision of the Taft-Hartley law the National Labor Relations Board would be empowered to obtain injunctions against jurisdictional strikes and secondary boycotts when they learn of them. The Board itself would also have the power to decide which employee should do the task over which they are disputing but it would not be permitted to name an arbitrator to take this problem off its hands.

Unions would also be subject to damage suits for unfair labor practices and the Courts may now provide damages against them resulting from jurisdictional strikes and secondary boycotts. Charges of unfair strikes or boycotts will receive priority over all other disputes and, if preliminary increase shows that there is reason to believe that the charges are true, the National Labor Relations Board is required to seek "appropriate injunctive relief." It is clearly an employer responsibility to inform the Board.

Employers are now allowed to express any views which "shall not constitute or be evidence of an unfair practice if such expression contains no threat of reprisal or force or promise of benefit."

Supervisory employees are excluded from the protection of the law although they may, if they wish, form unions and employers may deal with them. Hitherto the NLRB has ruled in favor of permitting foremen and supervisors to join unions and gain protection under the Wagner Act. Without the protection of the Wagner Act, it is difficult to see how powerful a union could be.

Professional employees cannot be combined with non-professional employees in one unit unless they vote for such an inclusion, nor can guards combine with other employees in a single bargaining unit. This might apply to laboratory technicians, for example.

The Board receives the duty of voting craft units when application is made for such votes. This section would enable small skilled groups to split off from larger industrial units. This would permit teamsters or carpenters to form their own bargaining unit separate from the other plant employees.

The National Labor Relations Board is not allowed to act upon any labor petition unless the Union has previously filed with the Department of Labor data which includes the following: names, titles, and compensation and allowance of its three principal officers if the aggregate is over $5,000; the manner in which the officers were elected; intitiation fees for new members and dues for regular members; detailed statements regarding the Constitution and By-Laws, showing the procedure for election of officers, calling of meetings, imposition of fines, disbursements of funds, audit of financial transactions, participation in insurance or other benefit plans and expulsion of members and grounds therefor. Clearly this section permits unions which do not go to the National Labor Relations Board to refrain from filing the registration data.

Important Provisions of The Taft-Hartley Law

1. Statement of six unfair labor practices.
2. Ban on the closed shop. Restrictions of check-off and maintenance of membership.
3. Ban on secondary boycotts and jurisdictional strikes.
4. Cooling-off periods.
5. Foreman's and other supervisory works unions not recognized.
6. Suability of unions increased.
7. Individual workman's rights better protected.
8. Small groups of skilled workmen can be in separate unions apart from industrial unions.
9. Freer speech for the employer.
10. Unions must also bargain collectively.

The National Labor Relations Board is not permitted to investigate any Union complaint unless there is on file with the NLRB an affidavit by each labor union official stating that "he is not a member of the Communist Party" or affiliated therewith, "and that he does not believe in, and is not a member of or supports any organization that believes in or teaches the overthrow of the United States Government by force or by any illegal or unconstitutional methods."

This provision would deprive all members of the Union of their rights under the labor laws of the Federal Government if their officers fail to sign the anti-communist affidavits. The law, however, permits communistis or others to be employed under union shop contracts so long as they pay dues. They are simply debarred from holding union office, while the union has the privilege of the protection of federal labor legislation.

Title 2 of the law provides for (1) conciliation in ordinary disputes affecting interstate commerce, and (2) national emergencies such as coal strikes, etc. This could possibly include a national milk strike.

This section opens with the creation of the new federal mediation and conciliation service with a director whose duty it shall be to offer his services in any dispute affecting interstate commerce or to intervene upon request. It provides for setting up certain procedures hitherto unavailable in the Act creating the Department of Labor. It is hoped that the new service will be on a plane with the National Labor Relations Board. It was newly created and its duties were taken from the Department of Labor because of the insistence by industry spokesmen that the present conciliation service was "partial" to labor,– a charge denied by the older organization.

The Act requires for the new conciliation service procedure that the parties exert every reasonable effort to make and maintain "agreements" including provisions for "adequate notice for any proposed change" in the agreement.

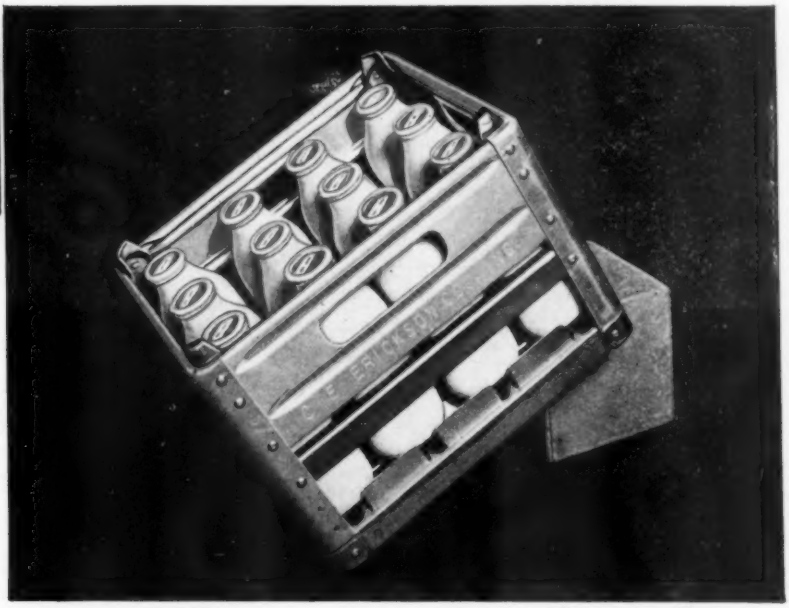
It is also required for action by the conciliation's mediation service that either party shall give the other a 60-day notice of proposed termination of a contract or its modification. Within 30-days of the expiration of the contract, the federal mediation service is to be notified and then the parties would have to maintain the status quo for 60 days. This is commonly called a cooling-off period whose merits, on the record, are

(Please turn to Page 39)

Scientifically Designed to Save

BOTTLE BREAKAGE

. . . center divider balances bottles — tilt at any angle, still open space between each bottle.



Model No. 760

Smooth!

EASY TO HANDLE - TO LOAD TO CLEAN - TO KEEP CLEAN

Most sanitary case made. Definitely "up-grades" the quality of your product in delivery. It's a case you can be proud of and you can be assured of less cost per delivery than with any other case made.

In rough handling, through the entire routine of dairy production and delivery — there is approximately 50% less bottle breakage with this case. Reason: it is scientifically designed — the center divider balances the bottles — tilt case at any angle and there is open space between each bottle.

Approximately 6 lbs.
1,560,000 less pounds to haul per 1000 cases per year.

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HOW MUCH INSURANCE?

HOW A SAFE PLANT WILL HELP

By

FRED W. BRAUN

Vice-President and Chief Engineer

Employers Mutual Liability Insurance Company of Wisconsin

A CONSCIENTIOUS insurance man can only give one answer to the question of how much insurance a milk plant owner should carry.

That is to advise the buying of the fullest possible coverage at the highest top limits.

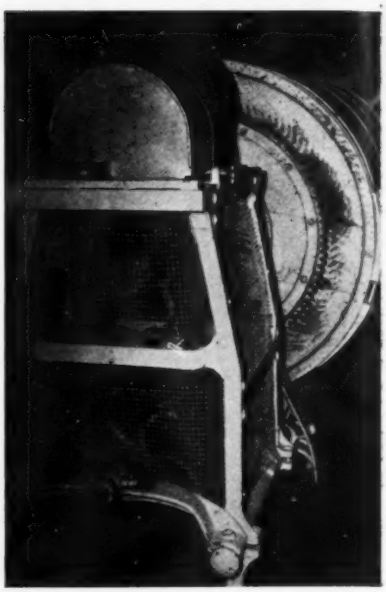
Such advice is based on sound experience and not on a desire to load the prospective insurance buyer beyond his needs. That is never good business. Few of us who have been in the insurance business very long but have been criticised by a policyholder . . . after a loss . . . for not insisting that he was better protected.

There are times and conditions, however, where a milk plant owner feels that his budget will not permit him to take advantage of the fullest protection possible. In such cases the insurance program should begin with adequate protection against those hazards which can cause the greatest loss . . . losses the total cost of which cannot be definitely measured.

Such a case is workmen's compensation insurance. This insurance protects the milk plant owner against any liability he may have for injuries of employees in the course of their employment. Depending upon the number of employees, practically every state compels the employer to provide this insurance protection for his employees. Failure to do so subjects the employer to severe fine.

In many states, the employer is also liable for diseases caused by the work of his employees. In case the state laws do not definitely impose such liability, there is always the possibility of a common law action by the employee for an alleged occupational disease. Although there is no specific, severe occupational disease hazard in milk plants, it is advisable to have insurance protection. There are such possibilities as employees contracting undulant fever from drinking raw milk or contracting other diseases of cattle which can be transmitted to humans.

The laws of many states provide severe penalties for the illegal employment of minors. In the event of injury of such a minor, the penalty in some states is double compensation with the penalty compensation to be paid by the employer and not the insurance carrier. Every milk plant owner should check carefully on the law in his state on the employment of minors to avoid such penalties.



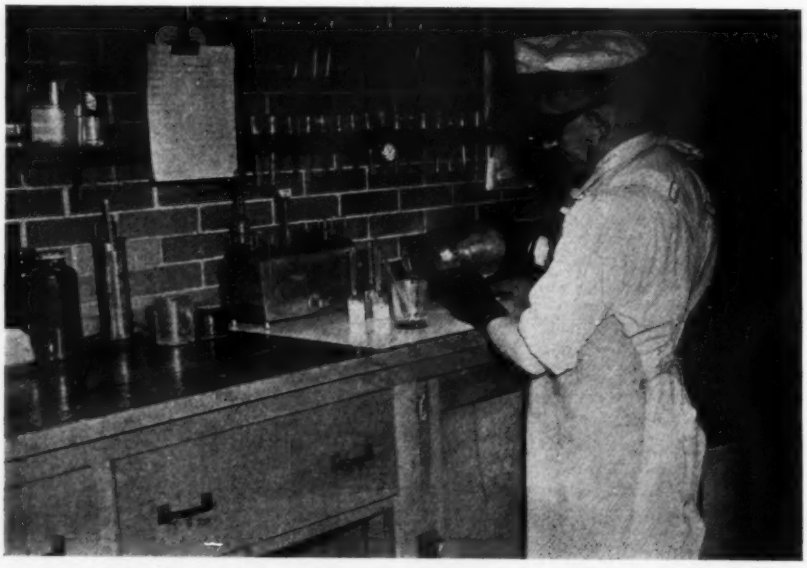
Belts, pulleys, shafts, chains and sprockets within seven feet of the floor should be completely enclosed by a standard wire mesh, sheet metal or wooden guard.

Next in importance for proper insurance against the unpredictable loss is public liability insurance. This includes products liability and the law permits verdicts for large sums in cases of injury to the public. Here the top limits above the customary $10,000 for injury to one person to $20,000 per accident cost so little more that it seems prudent to carry reasonably high limits.

A fully comprehensive general liability policy may be obtained which will protect the plant owner against almost any loss from accidents to the public for which he may be held liable, including operations of the business; use of trucks and autos, owned, non-owned, or hired; elevators; or acts of private contractors or their employees.

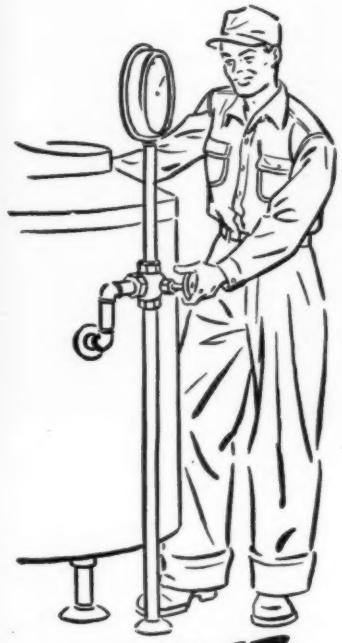
Having insured against those hazards which can cause the largest losses, we come to a consideration of those items where the possibility of loss is known . . . . whether large or small.

The recovery under fire insurance, for instance, is limited to the value of the property insured. Consequently the need for fire insurance can be judged on the basis of what the actual loss would be. In other words you have a chance to figure out pretty definitely, "can I afford a fire?" Few of us can and the comparatively small premium for adequate fire insurance looks pretty good to us compared with the possible total destruction of plant, equipment, and loss of business. The fire insurance policy can also be written to cover losses from vandalism,



Goggles, rubber gloves, aprons and boots should be worn for protection when handling acids or washing with caustic cleaners.

HERE'S HOW TO PROFIT WITH CHOCOLATE MILK TODAY...



MAKE IT RIGHT...

PRICE IT RIGHT...

SELL IT RIGHT!

Your Johnston Man Shows You How To Do All Three–Yes, you can make more profitable sales with chocolate milk *right now*. It's easy to do—just check these three points with a Johnston representative.

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windstorms, or to reimburse the plant owner for his losses during a period when the plant might be out of operation because of fire or from some other cause.

Other forms of insurance to which the milk plant owner would do well to give consideration is insurance against burglary, robbery or a hold up; also fidelity bonds to cover employees who are in a position to cause loss of money or property through fraud or dishonesty. Both these points may be insured under one comprehensive crime policy.

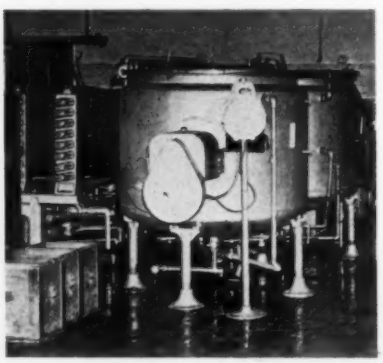
Cost of certain types of this insurance . . . workmen's compensation, for instance . . . can be high or low depending on the impetus which the milk plant owner is willing to put behind a program to operate his plant as safely as possible . . . to keep people from getting hurt.

Compensation premiums are based on the number of accidents and the severity of the injuries which they produce. It is also a fact that the premium saving through safe plant operation is only one of the savings possible. Cost of compensation is actually but one fifth of the total cost of most accidents.

Consider these items, not quite so evident, that are most always present when an accident occurs:

1. A valuable employee is lost for a varying length of time.
2. Confusion and nervousness caused by accident reduces the efficiency of other workers.
3. Loss of time by other employee or employees to aid the injured worker.
4. Cost of training a new worker if immediate replacement is necessary.
5. Possible spoilage of products at time of accident.
6. Possible spoilage of products by new or inexperienced substitutes.

A perfect example of the nervousness that accidents cause is the expression you have probably heard frequently that "our accidents run in bunches" or "when one person gets hurt we have a run of accidents."



Floors should be kept clean and free of slippery materials. Illustration shows well-guarded gears and proper insulation of electrical wiring.

General safe practices in milk product manufacturing include: *Proper Lifting*—Men should be taught to lift with the legs and not with the back, by crouching when they pick up objects rather than by bending over; *Bottle Breakage*—Men handling bottles must be especially careful of breakage. Cracked or chipped bottles should be discarded immediately. Broken glass should be cleaned up with a broom and pan, not with the hands; *First Aid*—An adequately supplied first aid kit should be provided in the plant, and some one trained in first aid procedure should be placed in charge. A small kit in each truck is also advisable.

In the plant itself, all belts, pulleys, shafting, chains and sprockets within seven feet of the floor should be completely enclosed by a standard wire mesh, sheet metal or wooden guard. All gears should be enclosed no matter where located.

Ice crushing equipment should be provided with a hopper which will prevent anyone from coming into contact with the crushing mechanism. Electrical equipment should be installed in accordance with the standards of the National Electric Code. All steam boilers should be carefully inspected regularly by a qualified boiler inspector. Outlet of the steam discharge from the boiler should be located so that no one can be burned.

All churns should be provided with a rail guard across the front to prevent anyone from getting caught while the churn is revolving.

Floors should be constructed of material which does not become slippery when wet. Drainboard walks are recommended in locations where the floor is continuously wet. A special hot water hose should be used for cleaning purposes . . . *ordinary garden hose is not suitable.* All couplings and other fittings should be tight, to prevent leaks from which hot water may be sprayed about. A temperature of 160° F. is hot enough for all practical purposes. Use of high pressure is not necessary or advisable. Employees should be cautioned to hold the hose securely while it is in use.

Sharp edges of drier knives should be protected while the knives are being carried from one place to another or when they may be exposed to accidental contact while on the machine.

Protective equipment which is advised for milk plant operations includes; an approved gas mask to be provided for use in case of emergency wherever

Example of a well protected ice crusher. This enclosed hopper will prevent anyone coming in contact with the crushing machanism.

mechanical refrigeration is in use. Goggles, approved for this type of work, must be worn when employees are handling acids, repairing refrigerators or opening containers of caustic cleaners. For protection against burns when washing with caustic cleaners, rubber gloves, boots and aprons should be worn. All men handling milk cans, cases, or other heavy materials should be urged to wear shoes with safety toes to prevent foot injuries.

Care and proper labelling of chemicals is exceedingly important. Corrosive Sublimate Tablets, for instance, should always be stored in a properly labelled container and kept under lock and key. Sulphuric Acid, used in connection with testing, should not be kept in bottles that formerly contained food products or beverages. The containers should be plainly labelled "POISON-SULPHURIC ACID" and kept in a place accessible

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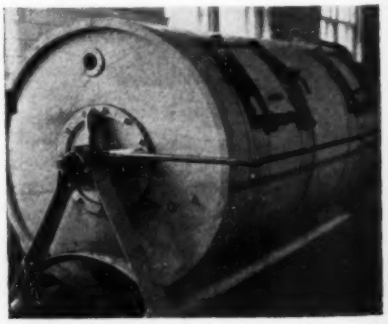

Churn provided with a rail guard across the front to prevent anyone getting caught while the churn is revolving.

KRIM-KO
CHOCOLATE DRINK
IS MY STAR SALES-PARTNER

Says
HAROLD V. HARDEN
Qualitee Dairy Products Company
San Diego, California

"I'm strong for Krim-Ko! This 2-to-1 flavor favorite is a sure-fire repeater with my regular trade and a whizz-bang door-opener when I go after new prospects", reports Harold V. Harden.

"This swell chocolate drink has helped me make my route something really to be proud of! Yes, Krim-Ko gets the customers. So Krim-Ko gets plenty of credit."

There's no waiting for Krim-Ko's popularity to "grow." First-off . . . first-taste . . . it's the favorite. By actual test, it's AMERICA'S favorite by 2-to-1. Let Krim-Ko build up your routes. Write today for full information about this easiest-of-all business builders.

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KRIM-KO CHOCOLATE DAIRY DRINK

The Beneficial Handling Of Milk With . . .

FARM TANKS *and* TANK TRUCKS

Quality Is Improved, Labor Is Saved, Headaches Are Soothed Says R. A. Shuey, Jr. In This Description Of A Promising New Development In The Golden Land

R. A. Shuey, Jr., Vice-president of R. A. Shuey Creamery, Oakland, California, presented this article as a paper before the May meeting of the Dairy Institute of California at San Diego. We have felt since we first saw the fairy land of San Francisco against the evening sky during a brief stay on Treasure Island in the War years, that there were ideas as well as sunshine in California. That the feeling was justified you will see as you read Mr. Shuey's article.

HAVE YOU EVER STOPPED in at one of your shippers and seen his milk overflow in filling and run down the drain? Well, I have and on more than one occasion. How many times a day this happens in our great dairy State, I don't know. But I do know that it can be stopped by the installation of farm tanks.

There are three types of farm tanks. (1) A holding tank, insulated but not refrigerated. (2) A submerged coil type. (3) Refrigerated wall type. After a complete and thorough investigation of these types of tanks by my brother Ed and myself, it was decided that the refrigerated wall type would be the best, although none of the types that we wanted had been built up to the time of our investigation.

We got together with the engineers of the Sanitary Metal Products Co. of Oakland and told them our problem and what we wanted. Out of this and many other discussions came an enclosed tank with a water section above the limit of the milk storage and a refrigerated section in the holding section itself.

Customary Methods Unsatisfactory

Let's follow through a typical dairy installation as most of us know it. The farmer milks his cows by machine and dumps his milk into a dump tank. The milk goes from here over an open cooler. The cooler is a landing field for any flies that get through the screen door or a crack in a board or window. Where has the fly come from? Your guess is as good as mine and my guess is the manure pile in the corral near by. That can only mean contamination. Or, it is a hot day and all the screens are in place and the windows and doors are open. Suddenly a violent dust squall or just a strong breeze blows the dirt in and some of its gets on the cooler. More contamination! Down over the cooler comes the milk picking up part of the bacteria left there by the dust and the fly.

The milk has reached the bottom cooler and is cold. Into the filter trough it goes, ready for a nice, hot 10 gallon can that the truck driver has thrown off his truck. Wait a minute! Let's look at the can. It was brand new thirty, forty or even 100 trips back, but Joe, the driver, slams the can around just as though it was impossible for him to hurt the can. The can's seams couldn't take it, and a minute crack in the seam has developed. A casual inspection would never detect it, but the bacteria know it is there and have found a good place in which to lurk. The can washer didn't sterilize the can as long as he should have today, and the bacteria have grown into a big family, and now all they are waiting for is some food so they can grow some more. Here it comes, the cold milk reaches the hot can and they decide that one is too hot and the other too cold so they do a little trading and the can is now very cool and the milk warmer than when it was in the trough waiting for the can.

The ice box door opens, cold air rushes out and the hot air along with the can and its milk goes into the ice box. It only takes a little while for the refrigeration system to cool that hot air down and then it goes to work on the can and its milk—but wait, another interruption, the door opens and another can and the hot air that goes with it comes in. The refrigerator groans and moans, extra work to be done, that could have been eliminated by the installation of a tank.

Let's not stop here. The cans have all been in the ice box for some time and then the truck driver comes along. He opens the ice box door and brings the cans out into the open air. He starts throwing them onto the truck. One of the lids jars loose when the can hits the truck and a little cream splashes out, not much, but just a little. Maybe 10 cents worth. Somebody didn't check all the can lids to make sure they were tight when they went into the icebox. The driver starts on the rest of his route. On the road out is a chuck hole and the truck jars a little and a couple of the lids that have come loose in handling bounce and out comes more cream. The farmer doesn't know about it and the truck driver doesn't think much of it. Only a few cents' worth of cream.

In the meanwhile the milk has started to cool off the air in the truck. Then another transfer of heat. At the next stop the truck is opened again and the cool air rushes in and is replaced by warm air. I have seen milk in cans in an insulated truck raise 6 degrees in hot weather. The bacteria are joyous at this rise in temperature. Especially those in that can with the cracked seam.

At last we are nearing the milk plant. A little more cream has gone, but not enough for the driver to worry about. They start to unload the truck and dump the milk. The dumper is very careful, but he has to work fast. He dumps each can and just a little remains in. This is later dumped by the can washer. Down the drain for it, too. How about drips? Did the farmer get credit for it? If he didn't, he has lost something valuable. A cup of drips in each can may test as high as 12 percent fat. A tea cup in each can represents a gallon in every 16 cans, and suppose it tests 10 percent fat, that is .86% of fat or in money at $1.18½ per pound of fat equal to $1.01 per 16 cans or $1.26¼ for 20 cans per day or $459.81 per year. This represents a maximum loss; to cut it in half might represent a more normal loss to the farmer.

Refrigerated Contrast

Now let us look at a refrigerated wall farm tank operation. The milk starts in the same small dump tank. It now enters the enclosed tank, prevents flies, dust from getting in, to a distribution trough where it is filtered. The trough spreads the milk evenly along the entire surface of the cooler. Over the water section it goes and down the refrigerated section. This section is full flooded so a constant temperature can be held without freezing on the wall. The temperature of the first milking can be brought down as low as 33 degrees

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PUZZLE:

Station Scene, 1957. Find the man who is getting a steady income from U.S. Savings Bonds. He was smart enough to start buying, back in 1947.

Of all the ways of saving up a tidy sum of money, one of the *easiest* and *safest* ways is to invest your money in U. S. Bonds.

You can buy Bonds either through the Payroll Savings Plan at your place of business—or if the Payroll Plan is not available to you, but you *do* have a checking account, through the Bond-a-Month Plan at your local bank.

Both ways repay you $4 for every $3 you save, by the time your Bonds mature. Choose the sum you can afford from the chart on the right. Start saving today!

Save each week	AND YOU WILL HAVE		
	In 1 Year	In 5 Years	In 10 Years
$2.50	$130.00	$668.97	$1,440.84
3.75	195.00	1,004.20	2,163.45
7.50	390.00	2,009.02	4,329.02
12.50	650.00	3,348.95	7,217.20
18.75	975.00	5,024.24	10,828.74

Save the easy, automatic way ... with U.S. Savings Bonds

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and kept there. The corregated section is all in one piece. Stainless steel has a high rate of conductivity. If you want to test this for yourself, heat one end of a long piece and then feel the other end and you will find that it is almost as hot as the heated end. At the end of the first milking the farmer turns off the water. Heat from water section is removed by the cold from the refrigerated section and brings the temperature to about 50 degrees, and maintains this temperature until time for the second milking. This prevents the growth of bacteria in the milk left on the water section between milkings.

The air temperature in the tank is somewhat higher than the milk but it is less than the temperature of the outside air on warm days. No new air is taken into the tank as warm air tends to rise and there is always a blanket of cold air over the milk. This means that dust laden air will not enter the tanks.

When the second milking enters the tank, it tends to raise slightly the temperature of the milk already in there if the tank is approximately half full at the end of the first milking. Where the tank is less than half full, our recording charts show little or no change in temperature when the second milking enters the tank. At the end of the second milking, there is still not more than a few degrees rise in temperature even if the tank is now full.

Our truck makes his first pick-up almost immediately after the second milk at the first ranch. This dairyman cools his milk to 44 degrees and the last of the second milking at the time of pick-up is 47 degrees or a three degree rise in temperature. The last dairyman in the pick-up cools his milk to 43 degrees and his milking was finished above five hours when the truck arrives. Usually his milk is picked up at 43 degrees, occasionally, if he is an hour late in milking, it will be 44 degrees.

The truck driver is a licensed weigher and sampler. He takes a stick reading, and then agitates the tank to get his samples. This sample is placed in a special ice box so that the sample will be in good condition on arrival in town. The tanker has two inches of spun glass insulation and a degree rise from the farm is a big rise in temperature. Most of the time there is no rise in temperature whatsoever.

At the plant the lines are hooked up, the milk agitated to be sure it is well mixed, and then pumped out. In an hour the tanker can be ready to go again with its tanks sterilized.

Three Way Benefit

Let's go back now and summarize the advantages to (1) Milk. (2) Farmer. (3) Distributor.

Milk. (a) After the milk has been brought down to the temperature wanted, there is seldom a rise of more than a few degrees. (b) It is possible to keep it colder thereby reducing the bacteria count by never giving them a chance to grow. (c) There is less chance for contamination from flies and dust and the net results are a better flavored milk.

Farmer. (a) His milk is sampled and weighed (by stick) at his ranch and any subsequent spillage is not his loss. (b) His clean up time is reduced because he doesn't have to tear down his cooler to wash it twice a day. (c) He doesn't have to watch his cans to be sure they don't overflow. (d) He uses less refrigeration because of less heat transfer and loss.

Let's look at it another way. A 20 can shipper should save on fat loss at least $250.00 per year. Clean up time at $1.25 per hour, 20 minutes per day $151.50. Watching cans, running back and forth and putting cans in ice box, 2 minutes per can, 40 minutes per day, $303.00 per year. Power saving? Unestimable loss from cans running over and spillage due to lids coming off. One gallon per week $52.00 per year, total saved $756.50.

Distributor. (a) Better quality and flavored milk, nothing but stainless steel is in contact with the milk at any time. (b) Saving of at least one man or a 3,000 gallon per day operation. (c) No returning or can washer to bother with.

1. We are using two sizes of tanks, 300 gallon and 500 gallon. We don't recommend less than 200 gallons for the 300 gallon tank and less than 350 gallons for the 500 gallon tank. 2. The installation costs approximate $300.00 including measuring stick, calibration, hooking up refrigeration and transportation of tank to farm. This figure will vary with different areas and distance of transportation. If the cooler is large enough before installation of tank, it will be more than sufficient after installation, less at least 20%.

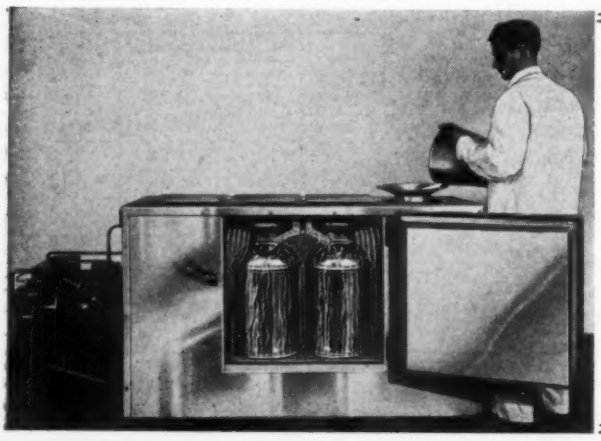
In tanks of non-symmetrical shapes, we recommend calibrations of 16th per inch against a foot divided into 100th. A 16th on 300 gallon is approximately 6/10 of gallon and 500 tank 1.1 gallons.

Pipe Shortage New Headache

Mid-Western Senators Warn of Reduced Milk Supply in Appeal to Steel Committee — Freight Charges Blamed

Lack of water pipe is causing a reduction in the supply of meat and dairy products in the mid-west according to recent testimony by Minnesota and North Dakota senators before the Senate Steel Committee.

Senator Edward J. Thye, Republican, of Minnesota, told the committee that livestock herds and poultry flocks are being curtailed in many northwestern communities because farmers



FOR REFRIGERATION WITHOUT LABOR
IT'S THE T-33
FOR MILK COOLING — FOR CREAM COOLING

So Easy . . . So Convenient and Fast. No heavy cans to lift. You merely place the empty cans in the cabinet, place the milk strainer in the proper opening on top of cabinet and pour your milk through the strainer.

ZERO MANUFACTURING COMPANY
General Office — Washington, Missouri

are unable to get piping and casing to replace worn-out wells that had supplied water to the stock.

H. G. Morrow, of the Spang-Chalfant division of National Supply Co., Pittsburgh, testified his firm had ceased selling pipe in Illinois, Wisconsin, Minnesota and Nebraska because the sales were unprofitable. Mr. Morrow blamed a combination of high freight rates and increased costs of manufacture.

●

Construction at Urbana

Lester Raymond Johnson, Batavia high school graduate, second from left, and John S. Soldwedel, Canton, Junior at the University of Illinois, receive University scholarships from the Chicago Dairy Technology Society. The society, represented by C. A. Abele, president and member of the Chicago Health department, right, and Dr. Paul H. Tracy, secretary, and professor of dairy manufacturers at the University, left, present checks for $100 to Johnson and $200 to Soldwedel.

ARE YOU A DAIRYMAN?

The following questions are not easy. If you can answer five you are pretty well informed. If you can answer eight you may give yourself a deserved pat on the back. If you can answer all of them you may consider yourself a dairyman.

1. What is the most desirable water temperature for washing dairy plant equipment?
2. What is the principal nonfat solid nutrient found in milk?
3. Who is the present Chief of the Dairy Branch of the Production and Marketing Administration?
4. What city has given its name to a plan for leveling out the difference between spring and fall milk production?
5. What is the difference between shipping f.o.b. your plant and shipping f.o.b. point of destination?
6. What is the slogan of the American Dairy Association?
7. When does price support under the Steagel amendment end?
8. With what does the Flannigan-Hope Act deal?
9. What causes milk stone?
10. What is the common name for bovine brucellosis.

Answers on page 51.

You are invited to send in questions for the ARE YOU A DAIRYMAN column. For acceptable questions that are published the *American Milk Review* will pay one dollar apiece.

Stoelting

PLANT-PROVED EQUIPMENT

FOR GREATER ECONOMY and EFFICIENCY

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SEALTEST LOOKS AT THE RECORD

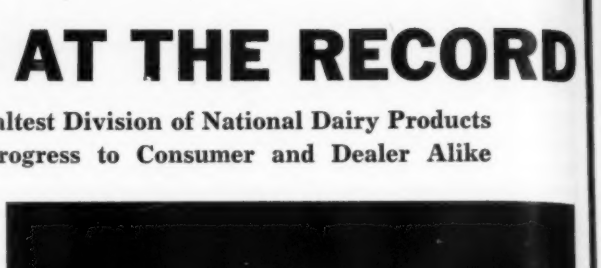
Rounding Out Twelve Years of Progress Sealtest Division of National Dairy Products Corporation Stands for Protection and Progress to Consumer and Dealer Alike

SEALTEST is a non-profit subsidiary of National Dairy Products Corporation that works for constant improvement in the quality and sanitation of products produced under its label. It establishes rigid standards of quality control for the processing of dairy products and contracts with National Dairy operating companies to abide by its control measures in return for the use of its symbol. The Sealtest symbol is an indication of the compliance of Sealtest member companies with the laboratory standards of protection for dairy products which it fosters.

Sealtest came into being early in 1935. Mr. T. H. McInnerney, then President of National Dairy Products Corporation, had stated many times that unless National Dairy delivered a character and a volume of service to the industry and to the general public which could not be equalled by our operating divisions acting as separate units, it would fall far short of the objectives which he had set for it. In addition to the requirement that National Dairy be of service to milk producers and to the employees in its operating Divisions, the primary consideration upon which its foundation was laid is its service to the consumers of dairy products. Mr. L. A. Van Bomel, President of National Dairy, has maintained that the most important factor in the development of the dairy industry is scientific research which will result in better dairy products for the consumer, new uses for milk and its by-products, and reduced costs of production and distribution.

It was apparent at this time that National Dairy had within its own companies the most complete laboratory facilities and the most effective body of dairy scientists that existed in the dairy industry. A total of 275 National Dairy laboratories were operating throughout the United States and were ready to be welded into one unit. Over 100 of these laboratories were fully equipped to do both bacteriological and chemical work and several operating companies, such as the Kraft Foods Company and Sheffield Farms Company, were fully equipped and staffed to do research work of a fundamental character. Upon this basis was conceived the plan of a quality control organization dedicated to scientific research for the improvement of dairy product quality and sanitation, and the development of new dairy products from milk surplus and by-products. This was the origin of Sealtest. In order to facilitate the conduct of the Sealtest work, its quality control functions were lodged in a separate corporation, Sealtest, Inc.

The core of the Sealtest system is the quality control



H. F. JUDKINS

supervisor located in each Sealtest processing plant. These men are carefully trained in the quality and sanitation standards established by Sealtest, and it is their functions to insure that there is no deviation from these standards in any phase of receiving, processing and distribution. A laboratory program of tests to be applied on raw materials and finished products in the plant is executed daily and frequent inspections are made of housekeeping and sanitation procedures. From the results of these routine tests and inspections, a continuing appraisal is made of plant performance.

In addition to daily control work, the quality control supervisor must be ready promptly to investigate any defect in product quality, and be prepared to determine its cause and apply the necessary corrective measures. Such defects might conceivably occur in the elmination of a high bacterial count, the correction of unsatisfactory homogenization of milk, the maintenance of high quality in ice cream mix ingredients, or the investigation of causes for substandard body and texture in ice cream. For these purposes, the working tools of

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laboratory protection for Sealtest dairy products are maintained at the source of production.

The various plant laboratories are grouped into zones with a zone laboratory and a zone quality control supervisor to direct the Sealtest system in each territory. The zone supervisor is responsible for the efficiency of quality control maintained by each plant control supervisor. His duties consist of:

a. Frequent visits to each plant in his area to appraise the work being done in the plant laboratory, to inspect the quality of finished products, and to review plant housekeeping procedures.

b. Periodic laboratory inspections of finished products from the plants in the territory are made in the central zone laboratory for comparative scoring.

c. Assistance in the solving of any problems which may occur in individual plants within the territory which cannot be solved by the plant control supervisor.

d. The direction of regional meetings for plant supervisors within the zone to discuss local quality control problems.

The overall direction of the Sealtest system is accomplished from its central office in New York. The President of Sealtest, Inc. is Mr. H. F. Judkins who, before joining the Sealtest organization, was the Director of Production for National Dairy Products Corporation. This position gave him an intimate knowledge of the manufacturing problems of the operating Divisions of National Dairy and placed him in a particularly good position to appraise their needs from the standpoint of quality control and plant sanitation.

Working through Sealtest's central office is its Standards Committee, composed of plant operators who establish the quality standards for Sealtest products and appraise the periodic reports which are sent from the various plant laboratories as a continuing record of quality control performance. Each plant is scored on its monthly performance by uniform standards in order that the relative standing of each plant can be recorded on a numerical basis. In this manner, an important element of competition is developed among the individual plants and operating Divisions and this competition has effectively stimulated an increased interest in quality control.

Under the direction of the central office of Sealtest is its plant appraisal system which functions through periodic visits by fieldmen to operating plants throughout the Sealtest system. Each fieldman is assigned to a territory and he inspects each plant in his territory at least once each year, spending sufficient time to make a complete study of product quality, plant housekeeping, maintainence and sanitation in operating methods. He makes a report on each visit to the individual plant manager, the zone supervisor and the central Sealtest office. These reports are scored in Sealtest headquarters, and the scores, together with suggestions for improvement, are returned to the operating plant and the zone supervisor.

The founders of Sealtest believed that much could be contributed to the purpose of the organization by the establishment of an Advisory Council consisting of outstanding dairy scientists and agricultural leaders. This Advisory Council was not to serve in a commercial capacity, but was to coordinate the objectives of Sealtest with the advancement of dairy science in the nation's colleges and scientific laboratories. The Advisory Council has functioned continually and has been expanded to include additional educators as the research and quality control program of Sealtest has been enlarged. This group meets annually in New York to discuss overall research and quality control problems in the dairy field and to plan for increased service and protection for the Sealtest consumer.

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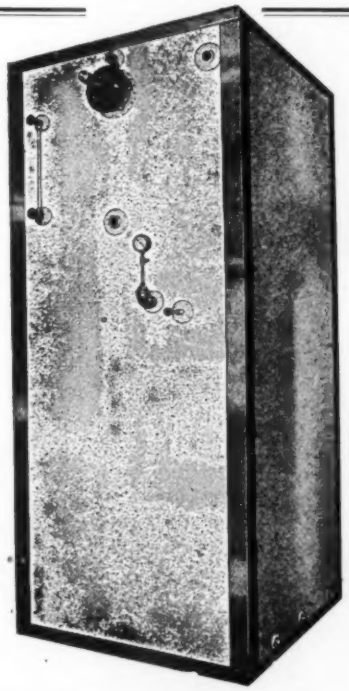

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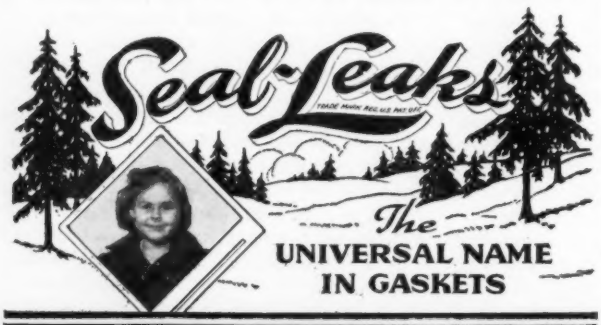

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Dairy Industry Conference

Original Papers Will Feature Two-Day Meeting at Cornell September 4 and 5 — Large Attendance Expected

MORE THAN 350 dairymen and dairy technologists from Northeastern United States and Canada are expected to attend the two-day Dairy Industry Conference at Cornell University September 4 and 5.

Starting the season off with a star studded bang the conference is designed for milk sanitarians, milk plant operators, and butter and cheese manufacturers. The objectives of the conference, which is sponsored by the Department of Dairy Industry of the New York State College of Agriculture, is to bring about closer relations between the College and the Industry as well as to disseminate news concerning State policy and programs relating to the Dairy Industry and information on work that is being done at Cornell.

The meetings will be held in Stocking Hall, Department of Dairy Industry building named for W. A. Stocking, former head of the Department. Registration begins at 8:30 a.m. September 4.

The program will deal primarily with the market milk side of the Dairy Industry the first day while all dairy products will be considered on the second. Speakers representing Colleges and Industry from four States will give papers, many of them based on original work and presented to the Industry for the first time at this conference.

The committee in charge is composed of Dr. A. C. Dahlberg, chairman, Dr. R. F. Holland, Dr. F. V. Kosikowsky, and Dr. E. S. Guthrie all of the Department of Dairy Industry.

The program:

September 4, 1947
Room 218, Stocking Hall
8:30 a.m. — 12 noon

Registration—8:30-9:00

The Sanitizing of Milking Machines—A. C. Dahlberg, F. V. Kosikowsky and H. W. Seeley, Department of Dairy Industry, Cornell University, Ithaca, New York

The New York State Pen Stabling Program—F. W. Graves, Senior Milk Sanitarian, New York State Department of Health, Albany, New York

The New Mastitis Control Program in New York State—H. G. Hodges, Supervising Veterinarian, Veterinary College, Ithaca, New York

Ice Cream Tasting Demonstration

1:30 p.m. — 5:00 p.m.

Homogenized Milk—Its Acceptance and Problems—G. M. Trout, Professor of Dairying, Michigan State College, East Lansing, Michigan

A Laboratory and Field Trial Study of Farm Milk Filter Aids—A. H. Robertson and J. C. Marquardt, Department of Agriculture and Markets, Albany, New York

The Future of High-Temperature Short-Time Pasteurization—C. W. Weber, Milk Sanitarian, New York State Department of Health, Albany, New York

Training Students for Dairy Industry at Cornell University—B. L. Herrington, Professor of Dairy Industry, Cornell University, Ithaca, New York

Milk Can Rolling Contest—R. Z. Holland, Professor of Dairy Industry, Cornell University, Ithaca, New York

Room M, Olin Hall
8:00 p.m.

Kodachrome pictures of birds with recordings of their songs—A. A. Allen, Professor of Ornithology, Cornell University, Ithaca, New York

September 5, 1947
Room 218, Stocking Hall
9 a.m. — 12 noon

Making Good Ice Cream—C. D. Dahle, Professor of Dairy Industry, Pennsylvania State College, State College, Pennsylvania

Developments in the Cheese Industry in New York State—J. C. Marquardt, Assistant Director, Department of Agriculture and Markets, Albany, New York

What's New in Nutrition—Miss Hazel Hauck, Professor of Home Economics, Cornell University, Ithaca, New York

The Troublesome Triangle—Alpheus Smith, Professor of Industrial and Labor Relations, Cornell University, Ithaca, New York

1:30 p.m. — 4:30 p.m.

The Demand Side of the Market Milk Industry—Leland S. Spencer, Professor of Marketing, Cornell University, Ithaca, New York

Dry Milk as I Have Seen It—Clyde E. Beardslee, Vice-President, The Borden Company, New York, New York

No Hand Stripping—A Kodachrome motion picture of the physiology of milk secretion and correct milking procedures as presented by W. E. Petersen, University of Minnesota; L. E. Bober, Babson Bros. Co., Chicago, IHincis

"Quality" Basis For New Institute

ICE CREAM manufacturers, milk dealers, and companies handling midwestern cream in the New England and Eastern Seaboard States tossed a new organization into the industrial association ring on June 19. The new organization, born in New York City, will be known as the Dairy Products Improvement Institute with headquarters in the Liberty Building, Buffalo, N. Y.

Dr. Carl W. Larson, until last year General Manager of the National Dairy Council and Managing Director of the Western New York Division of General Ice Cream Corporation has been appointed Secretary and Managing Director of the new Instiute. A graduate of Iowa State College with a Ph.D. from Columbia, Dr. Larson's distinguished career in the Dairy Industry includes a tour as Head of the Dairy Department at Pennsylvania State College, Assistant Professor of Agricultural Economics at Columbia University, and Chief of the Bureau of Dairy Industry in the United States Department of Agriculture.

The objectives of the new organization as adopted by the Board of Directors, are: "to foster the improvement of quality of milk and cream used in processing and manufacturing dairy products; to assist members, producers and others in the attainment of improved quality; to promote quality standards and the movement of milk and cream of equivalent quality between areas within the United States as may be of benefit to the dairy industry and to consumers, and of assistance to government officials; to collect and disseminate information pertaining thereto; and to do all other lawful acts and things incidental or necessary to accomplish the objects and purposes herein set forth."

The Institute will work cooperatively with other organizations including the Dairy Products Improvement Committee, the Milk Industry Foundation, the International Association of Ice Cream Manufacturers, and Dairy Producers, of plants producing sweet cream has been undertaken by the Dairy Products Improvement Committee with inspection work under the direction of Dr. Hugo Sommer of the University of Wisconsin.

The Directors elected by the membership, are as follows:

For 3 years—

A. J. Claxton, Meadow Gold Dairies, Pittsburgh Pa.; Walter Justin, Philadelphia Dairy Products Co., Philadelphia, Pa.; E. B. Parsons, Crowley's Milk Co., Inc., Binghamton, N. Y.

For 2 years—

George H. Frey, Colonial Ice Cream Co., Scotia, N. Y.; J. Ferry Garber, Penn Dairies, Inc., Lancaster, Pa.; R. J. Speirs, Abbotts Dairies, Inc., Philadelphia, Pa.

For 1 year—

G. H. Hood, Jr., H. P. Hood & Sons, Inc., Boston, Mass.; Vernon F. Hovey, General Ice Cream Corporation, Schenectady, N. Y.; W. A. Wentworth, The Borden Company, New York, N. Y.

The Officers elected by the Board are:

President—W. A. Wentworth, The Borden Company, New York, N. Y.

Vice President—E. B. Parsons, Crowley's Milk Co., Inc., Binghamton, N. Y.

Treasurer—Robert C. Hibben, International Association of Ice Cream Manufacturers, Washington, D. C.

Secretary and Managing Director—Carl W. Larson, 1412 Liberty Bank Bldg., Buffalo, N. Y.

The Executive Committee appointed by the Board, is as follows:

J. Ferry Garber, Penn Dairies, Inc., Lancaster Pa.; G. H.

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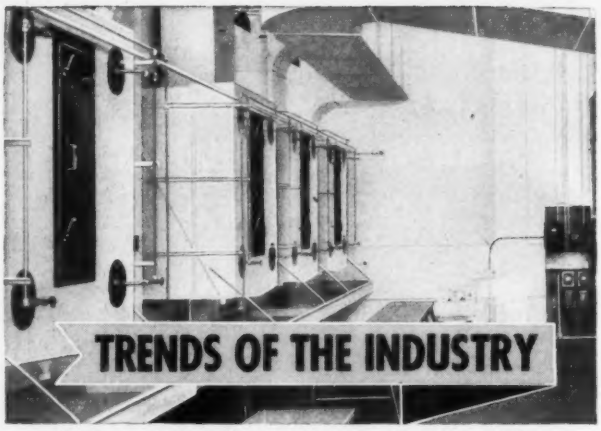

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Cows Are What We Make Them

W. T. Crandall, a member of the Department of Animal Husbandry, College of Agriculture, Cornell University, gave the following talk over the University Radio Station WHCU on the Agricultural College Hour. There is so much of value for better dealer-producer relations here that the "Review" feels it well worth your attention.

THERE are all kinds of cows in the dairy herds of New York dairy farmers. And I do not refer to breeds. There are good cows, fair cows and poor cows. It is often said that one third of our cows are profitable, that one third just break even and that one third are kept at a loss. This statement may not be strictly true but there can be little doubt that we have too many unprofitable cows in our New York herds because the cows in these herds produce an average of only 6,000 pounds of milk and 220 pounds of fat a year.

It does not just happen that a dairyman has high producing cows in his herd. Nor is it just bad luck when his cows are low producers. The credit or blame for establishing and maintaining good or poor herds goes to the dairy farmer himself who breeds or buys, feeds and manages all the cows in his herd. A cow inheriting low producing ability exists only because some one bred and raised her and some one has failed to cull her out of his herd as soon as her lack of ability was shown by her production.

Many a cow capable of satisfactory production is unprofitable because she is not given an opportunity to produce up to her ability. Low production may be due to disease, it may be due to poor feeding or to any one of a number of other important factors. In any case low production is not the fault of the cow. She always does the best she can.

Dairymen have a big job on their hands to make a success of their business. Success and profit in that business depends on the use of efficient healthy cows; low cost, high quality feeds, most of them home grown; efficient use of labor; and a market that pays a fair price for milk. I am not the one to be critical of dairymen who fail to meet all these requirements for success. We cannot however get away from the fact that a profitable herd can only be developed and maintained by continuously and carefully following through on three practices — breeding, feeding and culling.

Good cows cannot be made out of heifer calves that have no inherited ability for high production. On the other hand good inheritance cannot guarantee high production. Such inheritance in a calf is but a spark. Whether that spark of inheritance bursts into a flame of high and profitable production depends entirely on the way a calf is fed and cared for from birth to maturity. All that good breeding can do is to put the possibility for high production into a new born heifer calf. From the time a calf is born, the responsibility for final results is in our hands.

If we feed and care for a well bred calf properly throughout its development to maturity, the inherited possibility for production can be realized. If on the other hand, the calf reaches maturity with less than its full normal and natural development in size, vigor and conformation, disappointing production will result and much of the benefits expected from good breeding will be lost.

Good breeding programs in many herds have fallen

short in bringing about notable herd improvement because of poor feeding and management. Poor feeding results in undersized cows without the digestive and udder capacities for high production. Poor management may result in susceptibility to disease, actual disease and to dispositions and habits detrimental to full production.

The mere putting of purebred bulls into all the herds in a community or a county has not brought about marked improvement. Good breeding cannot be separated from good feeding or from a good health and disease control program. Real progress in herd improvement as expressed in increased production per cow can only come from better bred calves that are grown out better and better fed after they come into milk.

Yes, cows are what we make them. The responsibility for the results obtained from our dairies lies entirely with us and not with our cows.

Labor-Management Relations

(Continued from Page 24)

questionable. A case could be made to show that legal cooling-off periods turn out to be heating-up periods.

In the event of the strike in the cooling-off period emloyees would lose their rights under the Act and an employer violating this section would be subject to a cease and desist order of the NLRB.

Title 2 of the Act is concluded with the National Emergency section. This section would permit the Government to obtain an 80-day injunction to restrain strikes such as a coal mine stoppage while the Federal Agency tried to settle the dispute. At the end of the 80-day injunctive period provided in the law, the employees would be permitted to strike. The last provision calls upon the President to submit a full report to Congress of the findings by a Board of Inquiry and the votes of the Union members on whether they desired acceptance of the employers final offer.

Title 3 of the law deals with suits against labor organizations, including damage suits for contract violations, restrictions on payments to employees, and boycotts and other unlawful combinations, and restrictions on political contributions by Unions.

While labor unions may be sued now in State Courts of about three-fourths of the States, the law now makes it easier to sue Unions in Federal Courts by abandoning requirements concerning the amount in controversy and the requirement for diversity of citizenship. To circumvent the law, Unions are now trying to avoid no strike clauses in their contracts, or, like John L. Lewis signing contracts which apply only when the men are 'willing and able" to work.

Automatic and universal check-off of union dues is made illegal unless employees specifically authorize such deductions for a period of not more than one year. Hence, employers must get signed statements from each employee every year.

Contributions to welfare funds are made illegal unless they are administered jointly by employers and employees and a neutral, specifying the benefits derived from the fund, which must be audited annually. This would ban funds administered solely by unions and established since January 1, 1946.

The Federal Corrupt Practices Act is amended so as to protect unions from making "contribution" or "expenditure" from union funds "in connection with" any election to any political office. The New York Times of Sunday, July 13th, carries an article which says that Walter Reuther of the United Automobile Workers and Philip Murray, head of the CIO have decided to fight this provision as unconstitutional. Later reports indicate that this section is likely to be unenforced with regard to union newspapers because the law as written might apply to any and all newspapers.

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Sediment Tests of Bulk Condensed Milk

THE USE OF THE SEDIMENT tester, in quality work for the dairy industry, has been a practice for many years. The quantity and type of sediment on the linten disc indicates the conditions under which the milk or cream was produced and delivered to the plant.

Health and Dairy Departments are now active in making sediment tests on manufactured dairy products sold to the consumer. Many fines and condemnations have been assessed against the manufacturers based on the type of sediment found on these sediment discs.

Also the buyers of condensed milk and other ingredients are applying this test for sediment and foreign matter contained in these products. The manufacturers of bulk condensed milk should regularly make sediment tests on their finished products, as well as on the patrons' milk at the receiving dock.

Skim milk as it comes from the factory separator shows a clean white filter pad. If foreign sediment appears in the finished product, such matter was introduced somewhere along the flow in processing. Sediment tests on sweetened condensed milk show much more foreign matter than unsweetened condensed milk.

Whole milk should be filtered or clarified before condensing.

Sediment or *extraneous matter* may get into condensed milk from any of the following sources:

1. Poorly cleaned and poorly rinsed equipment, causing residue of sediment and milkstone from previous operations.

   Opened soldered joints and braces in the vacuum pan retaining accumulations of milk solids which become dark in color by action of alkali cleaners and drop down into milk.

   Accumulation of milk solids entrained in top of pan and loosened by action of boiling milk.
2. Rust and sediment from water and steam pipe introduced in hot wells and in super heating in the vacuum pan.
3. Washing powders — one teaspoonful of different brands of these products dissolved in 6 oz. of filtered warm water indicates that many of these products contain a large amount of dirt.
4. Detergents, scouring powders, and abrasives should not be used for cleaning the inside surfaces of the dairy equipment. Some of these contain 50 to 75% abrasives which are difficult to rinse away.

   Scouring pads, steel wool, metal sponges, and brush bristles furnish particles which appear on sediment discs.
5. Empty barrels can be asource of dirt and insects if bungs have not been in barrels before being filled. Rolling bungless barrels on sides can be a serious source of contamination. Our plant received barrels with 25% of bungs out in transit. We requested the cooperage company to nail a butter tub fastener over the bung, which they are now doing. The barrels now have no bungs out.

   Some companies paste a strip of tape over the bung hole, plugs being shipped separately.
6. Parts of insects and rodent hairs appearing on sediment discs are the most objectionable and cause the greatest trouble with the health department. The pests, if present in the plant, are apt to enter the equipment any time, either when it is empty or when milk products are stored in them, especially at night. The plant should be properly treated at all times for their riddance. There should be close daily inspection of the factory, equipment, and products to detect their presence.
7. Sugar sacks — The problem of emptying sacks of sugar into the hot wells of milk without conveying dirt, etc. from the outside of the sack has long been a problem to the industry. Brushing the outside of the sacks before trucking to hot wells will remove a large portion of this substance.
8. Sugar — Sediment tests on this product indicate that it is a source of sediment as well as the sugar sacks. Only a few plants have considered the sugar itself as a source of sediment. Sediment test on this product, however, indicates that many sacks of sugar do contain large amounts of sediment such as black and brown flakes, lint, string, some metal and occasionally what appears to be hair. This sediment in sugar evidently comes through its processing at the sugar mills. The milk condenseries should run sediment tests on their sugar supply. The presence of excessive and objectionable extraneous matter should be called to the attention of sugar suppliers. Some method of close straining should be installed between the hot wells and vacuum pan.

The Committee on Research and Quality Control of the American Bulk Condensed Milk Association has developed a method of grading condensed milk according to its sediment

Paper presented at Annual Meeting of American Bulk Condensed Milk Association—April 23, 1947

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We build stokers for other makes of Scotch type boilers.

Leffel boilers are ideally suited for oil or gas firing.

Available in sizes 6 to 250 H.P. inclusive normal (not inflated) rating, — and built with many plus qualities exceeding A.S.M.E. and State Boiler Codes.

Write, wire or phone us for full particulars.

THE JAMES LEFFEL & CO. Established 1862 **Springfield, Ohio**

See Leffel Boiler Ad on Page 50 Dept. MR

content by use of the Association's same sediment standard that is used in grading the milk delivered at the factory intake. All determinations are based on one pint of the original milk.

Samples of the condensed milk are used which contain the same weight of milk solids as are contained in a pint of the milk at intake. In the case of sweetened condensed whole milk the basic amount is one pint of 4% milk. In the case of sweetened condensed skim milk it would be the skim milk derived from one pint of 4% milk. In the one case the weight of total milk solids is the basis and in the other the milk solids not fat.

The formula for calculating the size of samples for both sweetened condensed whole milk and sweetened condensed skim are a part of this presentation.

Formula for Determining
Weight of Sample Required for Running
Sediment Tests on Sweetened Condensed Milk

SWEETENED CONDENSED WHOLE MILK

Composition 8% fat – 22% S N F – 42.5% sugar
Weight of sample required to be representative of amount of S N F in 1 pt. of 4% milk
1 gal. 4% milk weighs 8.60 lbs.

$$\text{1 pint 4\% milk weighs } \frac{8.60}{8} = 1.075 \text{ lbs.}$$

4% milk contains 8.67% S N F

$$\text{Weight of S N F in 1 pt. 4\% milk} = \frac{1.075 \times 8.67}{100} = .0932025 \text{ lbs.}$$

1 lb. = 453.59 grams
Weight of S N F in 1 pt. 4% milk= .0932025 x 453.59=42.28 grams

$$\text{Number grams of sample required} = \frac{42.28 \times 100}{22} = 192.2 \text{ grams}$$

1 gram = .03527396 oz.
Number ounces of sample required = 192.2 x .03527396 = 6.78 oz.

SWEETENED CONDENSED SKIM MILK

Composition 30% S N F – 42.5% sugar
Calculations for determining weight of sample of the condensed product that contains milk solids equivalent to one pint of skim milk skimmed from 4% milk.
1 gal. skim milk from 4% milk weighs 8.65 lbs.

$$\text{1 pint skim milk from 4\% milk weighs } \frac{8.65}{8} = 1.08 \text{ lbs.}$$

Skim milk from 4% milk contains 0.04% S N F

$$\text{Weight of S N F in 1 pt. skim from 4\% milk} = \frac{1.08 \times 9.04}{100} = .097632 \text{ lb.}$$

1 lb. = 453.59 grams
Weight of S N F in 1 pt. skim from 4% milk=.097632 x 453.59 =44.28 grams

$$\text{Number grams of sample required} = \frac{44.28 \times 100}{30} = 147.6 \text{ grams}$$

1 gram = .03527396
Number oz. of sample required = 147.6 x .03527396=5.21 oz.

The sample of condensed in each case is diluted with sediment-free water (filtered) and run through the standard sediment tester at milk intake. Comparison of these discs with those from the original milk and the filtered milk will denote any accumulation of extraneous matter during processing. The condensed milk can be classified according to

Built to Take Punishment

Sturdy, punishment absorbing flexibility built into Superior SQ Crates means protecting "give" or "flex" when subjected to shock. This feature alone greatly prolongs the useful life of Superior SQ Crates. Furthermore, Superior's crate flexing prolongs the life of bottles. Shocks, earmarked as potential bottle breakers, are absorbed by the crate and fail to reach the bottles. Use Superior SQ Crates and you will agree that these crates are superior in fact as well as name.

Write for descriptive literature and specifications on the complete line of Superior Dairyware.

SUPERIOR METAL PRODUCTS COMPANY
509 FRONT AVE., SAINT PAUL 3, MINN.

sediment content by use of the Association's Sediment Standards for Raw Milk.

To determine the amount of sediment which might originate in the sugar used the committee recommends weighing out a sample of sugar equal to percent of sugar in the condensed milk. For instance, if a sweetened condensed skim milk sample weighing 147.6 grams is used, 42% of this would represent the amount of sugar to test for sediment.

A water solution containing one pound of sugar is recommended if tests are to be run independent of the amount of sugar contained in the condensed milk. Sugar samples for testing should be taken from a larger composite sample of the sugar used in making a batch of condensed milk.

Conclusions — The sediment and foreign matter found in bulk condensed milk is introduced from the following sources other than in the milk as delivered by the milk patron:

1. The equipment.
2. Rust or other extraneous matter in water or in steam pipes.
3. Cleaning compounds.
4. Detergents and abrasives.
5. Empty barrels and cans.
6. Insects and rodents.
7. Sugar sacks.
8. Sugar.

Efficient straining and filtering of milk during processing will determine the presence of extraneous matter and thus lead to its elmination. If necessary a sample should be tested at the end of each step in processing in addition to testing the original materials used.

It is recommended that in running sediment tests on condensed milk for comparison purposes the sample used should contain the same amount of milk solids as was contained in a pint of the original milk. Based on 4% milk at the intake the sample of sweetened condensed whole milk would weigh 192.2 grams. For sweetened condensed skim milk it would be 147.6 grams.

Food — Key to Peace

(Continued from Page 7)

danger, Sir John Orr made his proposals for a World Food Board, which were studied by a Preparatory Commission of 17 nations at Washington in the winter of 1946.

The Commission agreed with the objectives of these proposals, and recommended that a World Food Council representing 18 member governments of FAO be set up to keep the current world food situation under constant review. The Council would co-operate with other international organizations in developing a world wide program to stimulate agriculture and industry, and help establish fair prices for farmers and consumers by such methods as fostering nationally held reserves of food, and arranging for international commodity agreements on major agricultural products. The Council would leave action to national governments, but would make specific recommendations for such action as problems arise. The main items of business at the coming Geneva Conference will be to consider the setting up of this World Food Council, and to review the national programs for food, agriculture, forestry, and fisheries.

The importance of the Geneva Conference is obvious. Studies of desirable increases in production and consumption are useful, indeed basic, but they will have little practical meaning until steps are taken to actually produce and distribute the amounts the world needs. This kind of action calls for co-operation among nations. The proposed Food Council is one of the first steps toward such action. It represents the minimum degree of collaboration needed to set a world food program in motion now.

Thus much depends on the coming session on whether or not to set up a Food Council. It may well be the starting point for the co-operation and understanding among nations without which there is no hope for a lasting peace, and as Sir John Orr has said, "if the nations cannot work together on food, they can work together on nothing."

●

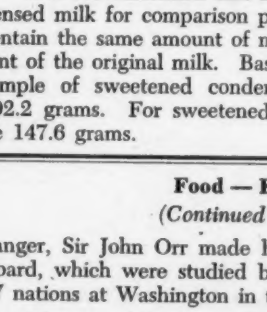
Rodney Chalk, a Canadian, has spent all of his life since his boyhood in England, on the Continent of Europe, in Southeast Asia, and in the United States of America. He was educated at Oxford (Madgalen College). With the armed services at Singapore in 1941, he was public relations officer for the Royal Air Force. Since November, 1946, he has been with the Information Service of the Food and Agriculture Organization of the United Nations.

The Story of a Milk Train

(Continued from Page 20)

cars to Syracuse depart from 60th Street as Train 793 at 2:45 a.m. Next train to leave contains the empty cars for the Delaware & Hudson, departing at 5:30 a.m. as No. 183. The empties for the St. Lawrence Division and west of Utica depart as No. 185 at 8:30 a.m. The last empties to start their return journey are those of the Rutland train, leaving 60th Street at 1:00 p.m.

During summer months can cars are stocked with ice at Richland and Carthage before they are spotted at milk station sidings. The Milk Service Department harvests approximately 14,000 tons of ice each winter, 50% of which is used in icing milk cars.



STAINLESS STEEL LINER and DRAWER

The new type butter and by-product route box. Made for stacking two square cases on top, side by side.

MADE IN TWO SIZES

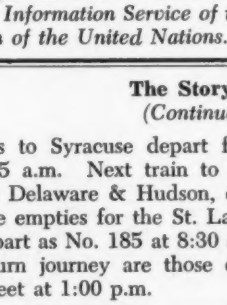
For Round Cases — Price $18.00
14¼ x 18¼ — Drawer 10 x 10 x 17
For Square Cases — Price $22.50
14¼ x 24 — Drawer 10 x 10 x 22
Will hold 48 and 72 lbs. of butter

For further information contact your jobber or write direct.

THE WALLMAC COMPANY

Dept. MR MIDDLEBRANCH, OHIO
Tel. Dial 9-1116

Better **DRY MILK**
AT LOWER COST
DRY MILK MACHINES
Built in Five Sizes



The patented, glass-smooth, "20-year cylinders" give years and years of maximum production of a superior dry milk at the lowest possible cost.

Many other exclusive features insure long life with low steam and power costs.

Complete details upon request.

OVERTON MACHINE COMPANY

DOWAGIAC MICHIGAN

Honored With Borden Awards

Chester D. Dahle (center), Professor of Dairy Manufactures at Pennsylvania State College, and Joseph C. Shaw (right), Professor of Dairy Husbandry at the University of Maryland, received Borden Awards of a gold medal and a thousand dollars at the annual meeting of the American Dairy Science Association at the Ontario Agricultural College in Guelph, Ont., on June 26. Congratulating the recipients is W. A. Wentworth, Secretary of the Borden Company Foundation. Professor Dahle was cited for his investigations in the production of cream and the manufacture of ice cream. Professor Shaw was named for his researches on ketosis (acetonemia) in dairy cattle, and various aspects of dairy cattle nutrition.

Fitting Production to Consumption

(Continued from Page 10)

a classified use basis in itself tends to provide for higher prices when less milk is produced. As more milk goes into lower-priced uses, the blended price declines. In addition to this, some of the orders provide for lower class prices only during a limited period when production is highest. In some of the earlier orders, base rating plans were included which also tended to increase returns to those producers who maintained a relatively even production.

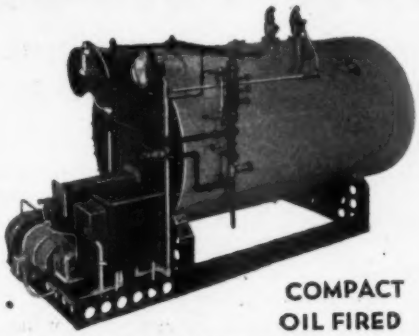
A third method of providing for higher prices during the season of low production used in Federal orders is the basing of the Class I price on the price paid at manufacturing plants or the prices of dairy products. A fixed differential above the price of manufacturing milk brings about changes in Class I prices in accordance with changes in the price of manufacturing milk. Both manufacturing milk prices and dairy product prices vary seasonally.

A fourth method used in Federal orders is the varying of the differential above the price of manufacturing milk or of dairy products. For example, the price of Class I milk in Chicago under Order No. 41 is 70 cents per hundredweight over the manufacturing milk prices in all months except May and June, when it is 50 cents.

A fifth method has recently been used in some of the orders. This provides for a "floor" under prices during the period of low production. Some orders provide that prices cannot decline during the last four months of the year below the price prevailing in August. In addition, these orders provide that the price during the months of March, April, May and June, shall not rise above the level prevailing in February.

These devices for providing seasonality in pricing are likely to have a cumulative effect and represent a rather broad attack on the problem. It is too early to evaluate the results in terms of production, but it appears likely that when the pattern of seasonal pricing has been fixed and permitted to operate, the problem of seasonal production in the fluid milk markets should be well on its way to solution.

PORTABLE STEAM GENERATORS



COMPACT
OIL FIRED
FULLY AUTOMATIC

Cleaver Brooks Steam Generator

Model OB-5M

50 H. P. 100 P S I

Fire Tube Four Pass Forced Draft Steaming Capacity approx. 1800 lbs. per hour. Hydrostatic Pressure 150 lbs. P.S.I. Fully Automatic Operation.

Boiler weight 7360 lbs.

AG SCHOONMAKER CO INC.
50 CHURCH STREET NEW YORK 7, NEW YORK
Phone: WOrth 2-7225

GBI
Reg. U. S. Pat. Off.

TECHNICAL SPECIALTIES FOR IMPROVING YOUR PRODUCTS

'FRIGIDRY' DAIRY CULTURES—6 TYPES
Trade Mark
Vigorous, rapid growing, easy to use. Repeated transfers unnecessary, saving several days' time. Uniformity assured and high viability retained by sub-zero, high-vacuum drying process. Each type tailor-made for its purpose.

'PROVALAC' CAROTENE DAIRY EMULSION
Reg. U. S. Pat. Off.
Convenient, economical method of fortifying ice cream and milk with Vitamin A activity—automatically produces desirable carotene or "June" color. Contains no fish oils. No special equipment required, blends easily with simple agitation.

'YELLO-A' CAROTENE BUTTER COLOR
Trade Mark
Colors your butter the natural way with carotene—the same color nature supplies when cows are on green pasture—also supplies natural vegetable Vitamin A activity—no fish oils or added artificial color used. Ideal for cheese also.

'BODY-GUARD' ICE CREAM STABILIZER
Trade Mark
New, different, more efficient—the stabilizer that economically produces the better quality ice creams, builds consumer appeal and increases your sales. High active ingredient content, properly blended to give maximum results.

Write for literature and prices

GENERAL BIOCHEMICALS, INC.
25 LABORATORY PARK • CHAGRIN FALLS, OHIO

ADA PROGRAM UNDERWAY

Expanded Magazine Coverage, Distinguished Awards Plan, Sales-Making Merchandising Events, Special Delivery Billboards Spearhead $1,200,000 Campaign

CHICAGO—The American Dairy Association has embarked the dairy industry on its greatest advertising push in history backed by a business action budget of $1,200,000 for the coming year.

The backbone of the new campaign is a combination of national newspaper, magazine and special delivery billboard advertising supplemented with sales-creating merchandising events.

The ADA executive committee this week adopted a budget breakdown that apportions the $1,200,000 budget on the basis of 75 percent for advertising, 10 percent for research, 7 percent for merchandising, 5 percent for administration, and 3 percent for food page publicity.

New Outdoor Feature

The new vehicle to be used in carrying the ADA message of dairy food goodness to the American public is the traveling billboard on the nation's express trucks. These posters will provide better than 5500 individual showings every other month in the food markets of the nation, according to Owen M. Richards, ADA general manager.

Moving among the millions from the surging city crowds of New York City's Fifth Avenue and Times Square to the cross roads corners, special delivery billboards on thousands of express trucks will bring colorful sales action messages to the buying public. An extra supply of the posters in two sizes, 4 feet by 5 feet or 4 feet by 10 feet, will be made available for display by dairy plants, milk and cream trucks, retail stores and scores of other uses.

ADA advertising in newspapers and magazines gets underway in September with a striking full page color ad in the *American Weekly*, supplement to leading metropolitan dailies. Glorifying the school lunch, this ad will reach into more than 9,200,000 homes.

This action, Richards explained, has been taken to lift the school lunch program from the political side and give the public a keener understanding of its economic and nutrition side.

The schedule of national magazine and newspaper advertising as approved by the executive committee includes *Life, This Week, American Weekly, Ladies Home Journal, Better Homes and Gardens, Good Housekeeping, McCall's, Women's Home Companion, Seventeen, Gourmet and Parents' Magazine.*

Roundup of Tie-ins

Highlighting the new campaign is a tremendous roundup of tie-in cooperation from related food advertisers, retailers and food page editors. Arrangements have been completed, Richards announced, for an extensive list of food page promotions between now and next June.

A partial list of these topics includes: "School Lunches Build America," "Rise and Shine" featuring better breakfast, "Whipped Cream for Parties," "Milk for Beauty," "What's in a Quart of Milk," "Ice Cream for the Holidays," "How to Use Cottage Cheese," "Cooking with Sour Cream," "Hospitality at Home," and a new cheese chart.

Inaugurated at the ADA executive committee meeting was a move by the dairy industry to recognize the various segments of the food industry that provide cooperation in marketing, merchandising and selling dairy foods.

The distinguished service awards, according to D. T. Carlson, ADA president, will give annual recognition for outstanding service to the dairy industry.

An awards committee of leaders in the food field, Carlson elaborated, will select one representative from each of the following groups: related food advertisers, chains, voluntary groups, independent grocers, newspaper and magazine food editors.

Presentations will be made each year at an industry-wide dinner held the evening prior to the annual ADA meeting in Chicago. The first such occasion when dairy farmers shake the hand of business is scheduled for March 1, 1948. The dinner will be attended by dairy leaders, the national ADA board of directors and special guests.

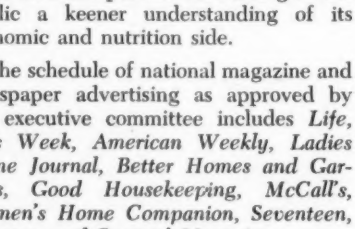
June Drive a Success

Early returns reported by members of the executive committee who represent the 36 ADA states from coast to coast indicate that the income of the national organization will approximate $1,200,000 this year as a result of the recent June financial campaign. These advertising funds are "set aside" at dairy plants each year by the farmers themselves in support of their own business action program to advance the sale of dairy foods.

The national membership drive for the American Dairy Association will be extended to a year-round basis, W. J. Swayer, vice president and membership chairman, announced. The campaign is designed to keep the entire industry posted and to give the dairy farmers of the nation a visual understanding of the wide sweeping ADA dairy products promotion program.

Why Milk Processors welcome

NEOCID DDT COMPOSITIONS



Milk Processors find they can now substantially reduce the flies and other insect pests that gather and breed around Dairy Plants, by spraying the inside of buildings with NEOCID* M 25, an emulsifiable DDT preparation made by the Geigy Company, "*Originators of DDT Insecticides*". Its deadly efficiency has been demonstrated with marked success wherever used. On barn walls and other places where a white residue is not objectionable, use NEOCID WA 50, a wettable DDT powder that also gives amazing results.

ORIGINATORS OF DDT INSECTICIDES

If NEOCID DDT Insecticides are not available locally, simply send us the name and address of your dealer.

GEIGY COMPANY, INC.
89 BARCLAY STREET, NEW YORK 8, N.Y.

*Reg. U.S. Pat. Off.

NEW LAND O' LAKES DIVISION

Appointment of Leonard H. Lundahl, veteran creamery equipment salesman, to the newly-created position of sales manager of the Equipment Sales Division of Land O' Lakes Creameries, Inc., has been announced by H. R. Swendson, division manager.

Lundahl, a native of Bergen, Minnesota, has been at Land O' Lakes 10 years and has 20 years experience selling equipment and supplies to creameries and other dairy plants.

In his new capacity, he will supervise the equipment sales force, which has recently been expanded, and will direct sales promotion work.

NEW FEATURE

It's always fun to have the first word on something new. This time it's a question and answer page that will appear in the *American Milk Review* for the first time next issue. Dr. James C. White and Dr. R. F. Holland, both of the Department of Dairy Industry at Cornell will conduct the new feature.

Dr. White, Assistant Professor of Dairy Industry at Cornell is a graduate of the University with a Ph.D in Dairy Bacteriology. He served a term with Bordens Cheese Company as Director of Research and Quality Control and returned to Cornell in 1946 to take over his present duties. Dr. R. F. Holland is a graduate of the New York State College of Agriculture at Cornell in 1936 and a Ph.D. in 1940. He has worked for the Cherry-Burrell Corporation and served as a Director of Chemical Research for the Grange League Federation. In 1945 he became Professor of Dairy Industry at Cornell.

The Question and Answer page will endeavor to answer queries on questions pertinent to the industry. All questions should be addressed to either Dr. James C. White or Dr. R. F. Holland, American Milk Review Question Box, Department of Dairy Industry, Cornell University, Ithaca, N. Y., or to this publication.

ORGANIZE NEW DEPARTMENT

Toledo, Ohio—Organization of a complete Customer Research Department of Kimble Glass, a division of the Owens-Illinois Glass Company, was announced today by Stanley J. McGiveran, General Sales Manager. Joseph F. Greene, Director of Research for the Kimble Glass Company until it became a division of the Owens-Illinois Glass Company, has been named Director of the new department.

Associated with Mr. Greene will be James J. Moran, former Technical Manager of the Sales Department, who will specialize in problems dealing with scientific ware of which Kimble is the world's biggest producer; and Winfield F. Smith, former Director of Technical Research for the Container Division, who will supervise development and improvement of packages to better serve the needs of Kimble customers.

NUTRITION CONFERENCE

Columbus, Ohio.—The Ohio Animal Nutrition Conference will be held November 6 and 7 at The Ohio State University, was the announcement made by the committee in charge today. H. E. Frederick of the Ohio Feed Industry Council and A. L. Gross of the Ohio Farm Bureau are industry members on a joint University-Industry Committee.

The Horizontal Plate Principle

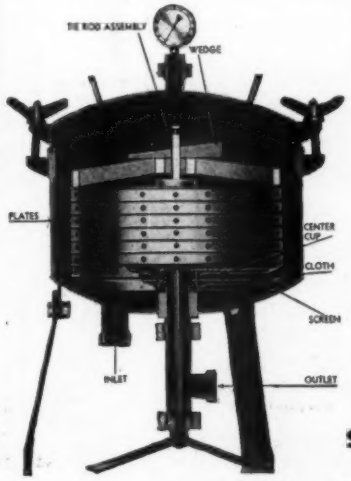
Gives You These 2 Important Things in

SPARKLER
Horizontal Plate
FILTERS

. . . for hot or cold milk

1. **Sanitation**—because Sparkler filters have all parts made of rolled, stainless steel, easily accessible for cleaning, with no internal threads, no castings, they offer the utmost in sanitary design.

2. **Production Efficiency**—because the filter medium is supported evenly on a horizontal plane by Sparkler stainless steel horizontal plates, filtration takes place uniformly over entire filtering area. *This means high flow rates.* The smallest particles, light or heavy, are removed. There is ample run-off space for filtered milk, yet the compact construction uses exceptionally small space.



"Sparkler Filters Give you Clean Milk Faster" . . . .

Construction and Design Features

1. Larger filtering area for continuous operation.
2. Positive "Sparkler" Wedge Seal—no "channelling".
3. Inexpensive, disposable filter medium—prevents blanking.
4. All parts removable for easy cleaning.

Write for details

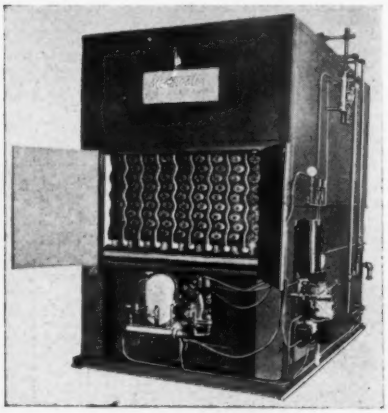
SPARKLER MANUFACTURING CO.
Mundelein, Illinois

USING OUR SEPARATOR • ITEMS OF INTEREST SKIMMED FROM HERE AND THERE

Small Boiler Design

LATEST CONTRIBUTION of Steamaster Boiler Company, Los Angeles, California, manufacturers of first class small boilers to the the engineering field is a 150 horsepower water tube boiler. This boiler is gas fired, multiple jet, blast oil type, and is a custom built job.

Steamaster's doctrine in boiler making, according to its president, is to "incorporate big-time boiler design and performance into the small boiler field" i.e., steam boilers that are nominally under 250 horsepower in size.



Steamaster technicians cleaim theirs to be "the only boiler of its size with four 'big time' design features: water tube principle, sectional headers, longitudinal drum, and inclined tubes".

The Steamaster line of boilers from 60 horsepower and up now offer a choice of burner arrangements allowing the user to burn oil, gas, coal, or any combination of these fuels.

For additional information and descriptive literature on the Steamaster line write to Steamaster Boiler Co., 5819 South Compton Ave., Los Angeles, California.

Peerless Pump

PEERLESS PUMP DIVISION of the Food Machinery Corporation has recently introduced a single stage, end suction, vertically split case centrifugal pump designated as the Fluidyne.

The Peerless Fluidyne is being manufactured in two types, both of which are capable of moving water and other liquids in capacities up to 1,000 g.p.m. against heads up to 270 feet.

The Fluidyne may be installed and will operate in any position,—vertical, horizontal or intermediate angle. Ease of maintenance and accessibility are stressed in the design of both types of pumps and it is stated that close attention to hydraulic characteristics results in units of high efficiency. Eight or more positions of the discharge opening (depending upon pump size) provide flexibility of installation.

A new Bulletin, No. B-165, illustrating and describing both types of these pumps and their applications, may be obtained by writing the manufacturer, Peerless Pump Division, Food Machinery Corporation, 301 West Avenue 26, Los Angeles 31, California.

Hand Protection

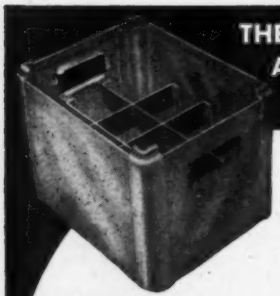
A NEW RUBBER GLOVE specifically designed to solve the hand protection problem in canneries, dairies and food-processing plants has been placed on the market by The Surety Rubber Co. of Carrollton, Ohio. The new glove is made of Dupont neoprene and is highly resistant to most acids, solvents, oil and greases. A particular feature of the glove is the corrugated patches which provide the right amount of traction at key gripping spots—palm, thumb, and first two fingers. The patches extend well over the end of the fingers to furnish greater protection and double thickness at point of greatest wear. Made of the same material as the glove, the patches are uncured when first attached and are then cured along with the glove itself to insure permanent adhesion. The gloves are available in sizes from 7 to 9, and are made with either curved or straight fingers and are light tan in color.

Repair Safety Sign

TO LESSEN the hazards of roadside repairs, Strayline Products Company, Dobbs Ferry, New York offer motorists and truck drivers a convenient collapsible two-part 24 inch x 9 inch sign reading "CAUTION" "CAR REPAIR". Made of embossed or rigidized sheet aluminum, the sign is designed for maximum day-and-night visibility, with letters in the bare reflecting metal,

outlined in black against a brilliant yellow background. Headlights reflect brightly up to 250 feet.

Supporting the sign at a height of 24 inches is a rigid tube fitting on a steel stand which opens to provide 22 inch spread for ample resistance against being blown over. The sign and stand folds to fit in a corrugated box 24"x6" x1½" and weighs 2½ lbs.



THE LOWEST PRICED ALUMINUM MILK CASE ON THE MARKET

WEIGHS ONLY 5 LBS.

Now Available for Every Size Square Bottle
HALF-GALLONS
QUARTS
PINTS
HALF-PINTS

Contact Your Jobber or Wire for Specifications

MID-TEXAS MFG. CO. Fort Worth Texas

NEW—INTERESTING—USEFUL

Magic Cream Siphons, for home use, remove cream from bottled milk, for use with coffee, cereals and desserts. Needed in every home.

Alert dairy firms have found this one piece, self starting siphon builds lasting good-will and benefits their business far more than the modest cost might indicate.

Free sample, without obligation, for either round or square bottles—two sizes are made.

$12.50...per gross $83.00...per 1000

Complete Satisfaction Guaranteed
Prompt Shipment

MERIT MANUFACTURING COMPANY
3455 EAST 150TH STREET CLEVELAND 20, OHIO

Cast Aluminum Lavatory

LE FIELL MANUFACTURING Company of Los Angeles has an improved lavatory designed for the modern factory. The Lavatory allows elbow washing by including a gooseneck soap dispenser and high spray head mounted 18" above rim of bowl. Unit is made through out of corrosion resisting aluminum alloy. Hot or cold water

may be operated individually or in mixture by conveniently placed foot pedals. To eliminate exterior plumbing connections, P-trap and clean out plug are contained in the aluminum base. Unit may be installed in any plant by merely connecting water and drainage lines. Shipping weight, crated—75 pounds.

New Milkstone Remover

PENNCLEAN, a new product for the removal of milkstone from dairy utensils and dairy plant equipment, now is being offered by the B-K Sales Division of the Pennsylvania Salt Manufacturing Company, has been announced. The new milkstone remover was developed at Pennsalt's Whitemarsh Research Laboratories. It has a phosphoric acid base with the addition of a wetting agent and an inhibitor to prevent corrosion of metals used in the dairy industry. It is being sold in quart and gallon glass bottles.

Pennclean is designed to remove quickly and easily dried-on-milk an milkstone which may be deposited on equipment and which increase bacteria count. It may be used effectively for the removal of milkstone from dairy utensils; for the daily cleaning of high temperature dairy processing equipment such as flash pasteurizers, and for creamery, cheese and ice cream factory equipment where processing temperatures cause milk solids to form rapidly, thus increasing ordinary cleaning time and cutting down temperature efficiency.

After numerous field tests in different areas for more than a year, Pennsalt is recommending its use both diluted and undiluted for removing milkstone. Application with a brush or cloth swab was found most efficient.

For flash pasteurizers and other equipment, circulation of diluted Pennclean was found the most effective. This methods softens the milk solids which are then easily removed from the hot milk plates.

Need for such a product in Pennsalt's line of dairy chemicals, said S. H. Crounse, Manager of Sales of the B-K Division, arose from the dairy industry's increasing efforts to improve sanitation on farms and from the increasing use of high temperature equipment in dairy processing.

Automatic Watchman

DETECTO-MASTER, styled by its makers as "a complete 15-area alarm system" is a new type temperature control arrangement produced by Lord-Taber Co., Canandaigua, N. Y.

The device operates by means of thermostat "dectors" placed at strategic locations and connected to a "control center". When any one of the detectors

is subjected to an abnormal temperature change it sends a warning to the "control center" where a red light goes on, a Klaxon is sounded and a needle on the "control center" meter points to the exact area in which the trouble has occurred.

The instrument may be used to detect any kind of temperature changes, either too much heat or too little heat according to the purpose of the installation.

Thermostats are pre-set at the factory for either "hot" or "cold" throughout a range of 20 to 200 degrees F. Special temperature settings are available.

Germ Killing Light

A NEW all-purpose germicidal unit designed for either direct irradiation with sterilizing ultraviolet or indirect room air disinfection has just been announced by Lustra Corporation

Milt King says . . . **"S-T-S MILK SEDIMENT TESTERS**

are unrivaled for uniform, reliable sediment testing. **That's the reason for their universal acceptance, and approval by authorities everywhere. IMMEDIATE SHIPMENT on Models B and C Testers, "E-Z Lock" Record Cards and Sediment Discs."**

Put to the Test— OUT-PERFORMS the Rest!

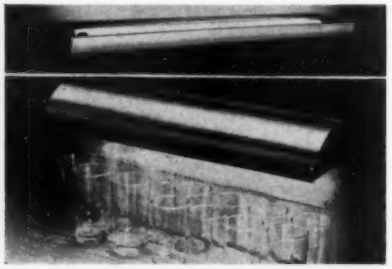
IMPORTANT! When buying Sediment Test Cards be sure you get "E-Z LOCK" with the Patented "DISC LOCATING CIRCLE"

SEDIMENT TESTING SUPPLY COMPANY

20 EAST JACKSON BOULEVARD • • CHICAGO 4, ILLINOIS

"World's Largest Distributors of Sediment Test Cards"

of America, 40 West 25th St., New York 10, N. Y. Protect-O-Ray No. G211, the unit illustrated, can be hung anywhere for temporary or permanent installation, is chromium plated with satin aluminum reflecting surface, and comes completely wired and equipped with a 15-watt



germicidal ultraviolet tube, 10-foot cord and plug, toggle switch, starter, and necessary ballast for 110-125 volts, 60 cycles AC. List price will be $17.95.

Of the two applications for which this unit is designed, direct and indirect, Lustra recommends direct irradiation as the most effective method of applying germicidal ultraviolet for protecting products from bacterial and mold contamination. Its application is widespread in pharmaceutical manufacturing and packing plants, in food processing, bottling, etc. Food stores and restaurants use direct irradiation in their walk-in ice boxes and refrigerators to kill the cause of mold and slime on meats.

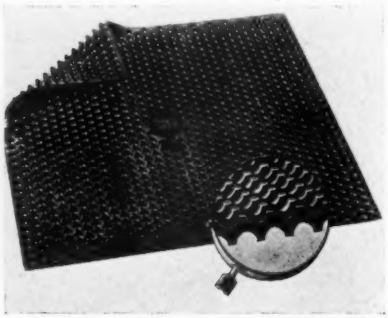
When used for indirect irradiation, as shown in the photo, Protect-O-Ray No. G211 accomplishes air purification and disinfection by irradiating only the upper part of the room. As the purified air hits the ceiling and walls it cools, descends and continues through the same series of repeated "washing" and purification.

Further information on Protect-O-Ray may be secured by writing to Lustra Corporation of America, 40 West 25th Street, New York 10, N. Y.

Rubber Mat

"MAGIC MAT", a new and unique rubber mat for added safety and elimination of fatigue in the home, office, and factory, has recently been introduced by Avenue Manufacturing and Sales Company of Chicago. Consisting of over 2,000 ¼" high rubber cones which cushion the feet, this black, non-marking mat is 21¼" square. Its overall thickness is 11/16" with a center lawer thickness of 3/16".

Among its features, scientifically designed for use where persons stand on their feet for long periods of time, is its



self-cleaning construction, cones on both sides for longer life, and elevation from damp floors to prevent electrical ground shocks.

In offices and for industry, it is outstanding for safety because of its non-skid feature and the cutting down of fatigue. Its use can be found in many plants, including dairies, food processing plants, hotels, and restaurants, etc.

Germicide Booklet

MARKETING of an improved granular germicide and disinfectant has been announced by the Columbia Chemical Division of the Pittsburgh Glass Company.

Composed essentially of a stabilized calcium hypochlorite the new product has been named Pittcide. It shows no appreciable loss of strength in its bactericidal and deoderizing properties even over long periods when the container is closed. The new product permits the germicidal action of chlorine to be employed surely, safely, and easily. It is soluble in either warm or cold water.

A special booklet on the multiple uses of Pittcide has been prepared by Columbia. Details of the correct Pittcide solution strength for 162 applications in 17 major fields.

Individual application details explain surface cleaning, method of applying, proper materials for applying, and similar information. Copies of this informative booklet may be had by writing Dept. P, Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth and Bellefield Avenues, Pittsburgh 13, Pa.

Improved Milk Strainer

A NEW 14 QUART, 4½ pound stainless steel milk strainer has been developed by the Solar-Sturges Manufacturing Co. of Melrose Park, Illinois.

Designed to fit into a 7¼ inch can neck or pail without tipping a large strain-

ing area permits the milk to filter without slowing down. There are no soldered joints or crevises, and only two parts to wash. A slotted bottom permits rapid filtration.

According to a statement from the company the strainer should last 20 years with proper care.

Yes! OUR CUSTOMERS MAKE MONEY

By Advertising and Identifying Their Product With

DEL-D-CALS

DEL-D-CALS REACH THE WORLD'S LARGEST CONSUMER MARKET AT THE POINT OF PURCHASE. NO OTHER MEDIA ACCOMPLISHES THIS SO EFFICIENTLY, EFFECTIVELY, ECONOMICALLY AND COLORFULLY AS OUR DECAL PRODUCTS.

Delcal

Write to Dept. A. M.
1217 W. Webster Ave.
Chicago 14, Illinois

Applied Easily, Quickly, Permanently To
Doors - Windows - Showcases - Trucks - Backbars

COFFEE the Milky Way

Café Olay

Reg. U. S. Pat. Off.

AMERICAN FOOD LABORATORIES, INC.,
860 ATLANTIC AVENUE, BROOKLYN 17, N. Y.

OWENS-ILLINOIS OFFICIAL

Toledo, O.—Lucian Taylor, assistant general sales manager of Owens-Illinois Glass Company, died July 1 in Toledo hospital after a brief illness. He was 53.

Mr. Taylor had been with Owens-Illinois since 1912.

After serving as a salesman in Minneapolis, Baltimore, and Buffalo, he was

Lucian Taylor

appointed branch manager at Baltimore and later at Philadelphia. He was named assistant general sales manager April 1, 1938.

Mr. Taylor was born at Alton, Ill., May 2, 1894. During World War I, he served overseas as a first lieutenant in the infantry. He is survived by his wife, Rebekah S.; daughter, Mrs. Stephen V. Gallagher, Chicago; sons, Lucian W. and Richard B., Toledo. Burial was in Toledo's Woodlawn cemetery, following services in St. Mark's Episcopal Church.

●

S. W. BEEKMAN PASSES

Oneida, N. Y.—The Smith-Lee Co., Inc., of Oneida, New York, announces the very deep-felt loss of Mr. S. W. Beekman, general office manager for thirteen years, whose sudden death occurred on June twentieth.

Mr. Lowell Grafton has been named as successor to Mr. Beekman, and will establish headquarters with the parent company at Oneida, New York. Mr. Grafton has been connected with the Piqua Cap Company and the Smith-Lee Co., Inc., Branch at Piqua, Ohio

●

ALAN GROVER MAC LEOD

Alan Grover MacLeod, Secretary of the New England Research Council and a leader in the development of coordinated marketing research in the Northeast, died in Boston June 28, 1947.

Dr. MacLeod was born 42 years ago in Arlington Heights, Mass. His boyhood was spent in Canada and he was graduated from the University of Saskatchewan as a chemist in 1927. Later he became interested in agricultural economics and studied at Harvard University in 1931 and 1932, receiving his Ph. D. degree in economics in 1941. He spent some time as a Consultant for the Brookings Institution in Washington and later served on the staffs of the University of New Hampshire and the University of Connecticut. During the summer of 1945, he was Economic Advisor to the Rehabilitation Committee for the Province of Manitoba, Canada, and was responsible for the preparation of a post-war planning report for that Province.

As Executive Secretary of the New England Research Council, he was a field agent of the Bureau of Agricultural Economics with headquarters in Boston, Mass. and, during the war years in Storrs, Conn. He worked closely with agricultural economists in the New England States in the development of coordinated dairy marketing research projects for the Land Grant Colleges and Experiment Stations in the Northeastern and North Central regions.

NEW SALES MANAGER

Chicago, Ill.—The appointment of George B. Hamilton as sales manager of the cereal products department for International Minerals & Chemical Corporation has been announced by J. R. T. Bishop, vice-president of the Amino Products Division.

●

W. E. McGINNIS ELECTED

W. E. McGinnis has been appointed to the Board of Directors and elected Vice-President of the West Carrollton Parchment Company, West Carrollton, Ohio.

This announcement was made by M. E. Moyer, President and General Manager of the company and the appointments took effect on June 24.

His many friends in the trade will be glad to hear of his promotion.

●

G. M. WINTERS NAMED

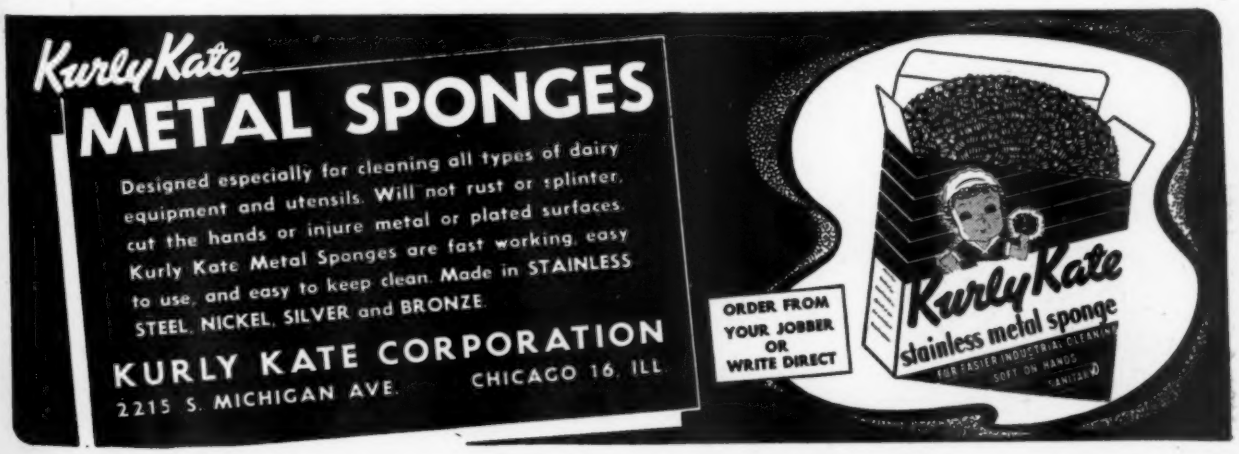
Chicago, Ill.—George M. Winters has been named EZE-Orange Company's division sales representative for the states of Virginia, West Virginia, North and South Carolina, and the District of Columbia, according to a recent statement by Merle V. Wells, sales manager of the company.

How Much Insurance?

(Continued from Page 28)

only to employees using this material. Any other caustics or acids used should always be kept in labelled containers and so located that no one is likely to make the mistake of using them for a purpose for which they were not intended.

Driving accidents are not only expensive but they are poor advertising for your company. Insist that your drivers follow all safe driving practices to avoid accidents. For milk hauling and delivery work, select responsible drivers in good physical condition. Care should be used to see that trucks are kept in good condition so that accidents will not result from mechanical failure.


Kurly Kate
METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL, SILVER and BRONZE
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ORDER FROM YOUR JOBBER OR WRITE DIRECT
Kurly Kate
stainless metal sponge

WANTS and FOR SALES

RATES: "Position Wanted," 50c. Limit of 50 words; 2c for each additional word. All other advertisements, 5c a word ($1.00 minimum). Keyed ads, 15c extra to cover return postage. The name and address should be included in counting the words. All payments strictly in advance.

FOR SALE

USED MILK BOTTLE CRATES—Can deface old name and rebrand. Write or phone for present day inventory. Ohio Creamery Supply Co., 701 Woodland Ave., Cleveland, Ohio. 8-M-t.f.

NEW JERSEY, Newark and Pennsylvania approved milk in tanks or cans, on daily or contract basis. Major Smith, 3229 Bergenline Ave., Union City, N. J. 8-M-4

WE ARE OFFERING for sale, f.o.b. our San Francisco plant, the following items: 200 gross Standard Quart Milk Bottles; 40 gross ½ Pint Milk Bottles; One Rice & Adams Bottle and Case Washer, good condition; One Model "M" Milwaukee Filler and Capper, good condition; one 2 h.p. Brunner Compressor; One Model D4 Bagby Ice Cream Novelty Filler, new; 600 Western Ice Cream Brick Pans, 2½"x7½"x25"; 200 Standard Pint Milk Bottles. Spreckels-Russell Dairy Co., Ltd., 8th & Bryant Sts., San Francisco 3, Cal. 8-M

FOR SALE—200 gallon per hour Steam Pump Viscolizer complete with motor. In good running condition, $400.00. McAllister's Dairy Farms, Inc., Warren, Ohio. 8-M

FOR SALE—Combination pasteurized milk and Ice Cream manufacturing business, well established. One retail milk route, ten wholesale dealers, eleven electric ice cream cabinets, three soda fountains. About 90,000 quarts retail milk and 22,000 gallons Ice Cream 12 months. Modern Grocery and Food Market and Soda Bar Lunch on second floor. Modern Overnite guest rooms on third floor. Established 15 years. Land, building, equipment, stock complete, central location, 20,000 population and on main highway. Business paid for itself in 8 years. Price $40,000. Would cost at least $65,000 to build and equip this place as it is today. Cole's 101 So. Keystone Ave., Sayre Pa. 8-M

FOR SALE—Michigan ice cream and milk plant. Yearly ice cream sales over 200,000 gallons. Milk receipts 22 million pounds. Manufacturing powdered and condensed milk. Latest stainless steel equipment throughout. New over-capacity automatic power plant. Box 157, care this publication. 8-M-3

FOR SALE

FOR SALE—1500—1 quart milk cases in good condition. $1.25 each, F.O.B. Hartford. For round bottles. Lincoln Dairy Co., Hartford, Conn. 8-M

FOR SALE—In Midwest—Pasteurizing plant and only Ice Cream factory in city of 12,000. 1946 gross sales $154,000. Excellent building and equipment—located uptown with large retail sales room. Wholesale and retail—4 delivery milk routes. Old, well established business. Owner wishes to retire. Box 151, care this publication. 8-M

FOR SALE—One Model 27 Creamery Package Milk Filler, 6 valve, good condition. Grand Haven Sanitary Dairy, 420 Fulton St., Grand Haven, Mich. 8-M

FOR SALE—20 Stainless Steel Milk Tanks, on trailers, cheap. 1100 gallon to 3400 gallon, also storage tanks. Myer Simon, 150 West 87th St., New York City. 8-M-2 8-M-2

FOR SALE—One new Braun straightaway can washer, never used, 14 cans per minute. New York City approved—2 compartment, complete with all controls, etc. Immediate delivery, New York City plant. Box 153, care this publication. 8-M

FOR SALE—1500 used quart cases for round bottles—good condition—immediate delivery—New York plant. Box 154, care this publication. 8-M

FOR SALE—Dairy in town of 15,000. Only pasteurizing plant in town. Equipment for 150 gallons. Business can be increased. Green's Dairy, Blytheville, Ark. 8-M-3

FOR SALE—Pasteurized milk and Ice Cream plant in northern Minnesota. Did $100,000 worth of business last year. Box 155, care this publication. 8-M

FOR SALE—11 insulated, glass lined 3000 gallon capacity horizontal milk tanks, removed from Pfaudler Cars, in good condition, inside dimensions approximately 78" diameter by 14' long. Located Chicago district with available auxiliary electrical and agitator equipment. All available for inspection. Priced "as is". Communicate with H. L. Roth, Fruit Growers Express Co., 1101 Vermont Ave., N.W., Washington, D. C. 8-M

FOR SALE

FOR SALE — WAREHOUSE REMOVAL SALE — SPECIAL LOW PRICE ON FOLLOWING STOCK ITEMS: 4000 gallon Pfaudler Milk Storage Tank; 5—300 gallon Pfaudler Vertical Jacketed Tanks; 2—230 gallon Kaestner Vertical Stainless Steel Tanks; 5 ft., 6 ft. and 8 ft. Combination Direct Expansion Surface Coolers; 9 ft. 10 tube, 12 ft. 10 and 16 tube Internal Tubular Coolers; G-100 Cherry-Burrell Nu-Line Filler; 4 and 8 Wide Bottle Washers; Creamery Package Straitaway Can Washer, 6 c.p.m.; No. 70 De Laval Motor Driven Separator; 500 gallon Manton Gaulin Stainless Steel Head Homogenizer; 200, 300 and 450 gallon Cherry-Burrell Bronze Head Viscolizers; Two Compartment Stainless Steel Weigh Can, 44"x58"x21"; 6 ft. Copper Vacuum Pan; No. 25 and No. 55 Bump Sanitary Pumps; Davidson 5x8 Bronze Sanitary Pumps; Power Case Conveyor; 150 gallon Vogt Continuous Freezer; 40, 50 and 100 quart Direct Expansion Freezers; many other miscellaneous items. Write or wire your particular requirements. Lester Kehoe Machinery Corporation, 1 East 42nd St., New York 17, N. Y. 8-M

FOR SALE—De Laval E-16 (800 lbs. per hour) electro separator, like new; O & S 5 h.p. upright high pressure boiler, tubes excellent; Babcock testers (electric and steam). ¼ h.p. electric motor. Brine pump. Box 156, care this publication. 8-M

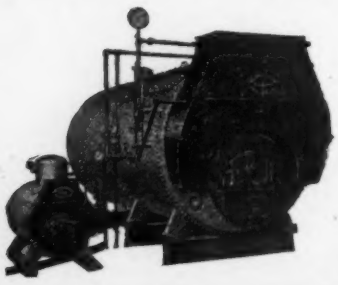
FOR SALE—Used 150 h.p. Ames Horizontal Boiler with stack and stoker, now operating and inspected for 125 pound steam pressure. Want to buy a 50 h.p. Boiler with oil burner. Sauquoit Valley Dairy Company, Inc., 491 French Road, Utica 4, N. Y. 8-M

FOR SALE—30 gross round squat bottles (4c each). Also (50) wood milk crates. Call or write Bindler's Dairy, Cedar Rapids, Iowa, R. R. 4. 8-M

FOR SALE—Available about September 1st, quart, pint and half-pint milk bottles, freshly emptied, standard round shape, No. 2 cap seat, 56 mm. Alsoeco finish, lettered, approximately 10% Applied Colro Labels, in straight carload or combination carload shipments. Dairy changing their package — must sell — prices very low and reasonable. Samples upon request. *Signer Bottle Supply Co., Cincinnati 14, Ohio.* **8-M-t.f.**

FOR SALE—Wright Barnum Can Washer, manufactured by R. G. Wright & Co., Buffalo, N. Y. Used 3 years and in A-1 condition. Hand operated. Four compartments, Rinse, Wash Solution, Rinse Steam, Dryer. Price $150.00. Marvin & Cooley, Montpelier, Vt. 8-M

LEFFEL SCOTCH MARINE BOILER



Universally accepted and used as the Ideal Boiler for MILK PLANTS where Economical Service, High Efficiencies and Lowest Maintenance Costs are required.

Built in sizes 6 to 250 H.P., to comply with the A.S.M.E. Boiler Code and all State Boiler Laws.

Splendidly adapted for firing with COAL (hand fire, or with the specially designed LEFFEL STOKER) OIL, GAS and WOOD.

THE JAMES LEFFEL & CO., Established 1862 Springfield, Ohio

See Additional Leffel Stoker Ad on Page 40 Dept. MR

FOR SALE

FOR SALE—One Rogers 42″ copper vacuum pan with hot wells and pump. Price $500.00. Write Box 309, Bristol, Va. 8-M

FOR SALE—One 2000 gallon glass lined Pfaudler Holding Tank with Agitator and motor. In good condition. Immediate delivery. Price, $1,750.00. H. Baker Milk Co., Inc., 2 E. Monroe St., Passaic, N. J. 8-M

FOR SALE—48x30 stainless steel vacuum pan. 400 gallon oval coil pasteurizer, stainless steel lining; 300 gallon forewarmer, stainless steel lining; 500 gallon stainless steel cheese vat. Above have been replaced with larger equipment, have had very little use, and are as good as new. 3x3 York ammonia compressor; 5x5 Phoenix ammonia compressor; McKinley, 4 cans per minute, rotary can washer; two stainless steel 2 compartment weigh cans; one Specialty Brass forewarmer, 7000 lbs. capacity. Saginaw Creamery Co., Saginaw 5, Mich. 8-M-4

FOR SALE—Two Erie City 150 H.P. boilers with stokers; one 20 H.P. Dutton boiler; one 6 ft. copper condensing pan with Bryer condenser; new air and water cooled Freon compressors from ¾ to 5 H.P., all complete; Fairbanks-Morse deep well pump. Model 6920, complete with motor; one direct expansion surface cooler; 18-2 in. tubes, 12 6 ft. long with covers; Jensen fan type cooler, tinned copper, 8 sections, aluminum covers, 14,000 lbs. per hour pasteurized, 20,000 lbs. raw milk; one Jensen cabinet cooler, 11 water and brine sections; one Kron 1000 lb. receiving room scale with stainless steel weigh can and receiving vat; 500 half-pint milk cases, 20 to the case, wire partitions and covers on top; 5,000 quart cases in perfect condition; stainless steel truck tanks—2275, 3200, 3300 gallon oval; one 2875 Heil oval frameless tank complete with trailer; one 2000 gallon horizontal stainless steel milk storage tank; Meyer Dumore 8 wide Sr. bottle washer just rebuilt, will wash square and round milk bottles; 250 gallon homogenizer, bronze head with motor; 100 gallon viscolizer complete, stainless steel head; 200, 800 gallon New York City approved viscolizers and homogenizers, stainless steel; Braun straight-away can washer, 3 to 4 per minute; one rotary can washer, 2 to 3 per minute; Mojonnier over-run tester; one 5x5 Jurick, one 6x6 York compressor, complete with motor, condensers, receiver, gauges, traps, etc.; one 5x5 York compressor only; 2 sections internal tube coolers; 100 gallon stainless steel pasteurizer, no agitator; one sanitary pipe wash sink; 2 No. 90 Mojonnier bottle fillers and cappers; one Emery Thompson 40 quart Batch freezer; one Petro oil burner complete with controls and motor; one International 10 can cooler; one No. 4 magnetic DeLaval milker. Double and single Cheese Presses, new and used. Two new 10,000 lbs. Stainless Steel Cheese Vats. Sam Edelmann, 321 Broadway, New York 7, N. Y. WOrth 2-4975. 8-M

WANTED

DAIRY PLANT OWNERS SEEKING
Progressive Steam Fitting Concern
Plants Modernized
Steam and Condensation Surveys
for Fuel Conservation
Boilers and Machinery Installed
Heating and Insulation
Eastern Territory Covered
S. PINN & Son
1271 Hoe Ave. New York 59, N. Y.
8-M-t.f.

WE ARE INTERESTED in purchasing a quantity of Quart, Pint and Half-Pint Cases. Send full particulars stating quantity, condition and price. Box 150, care this publication. 8-M-t.f.

WANTED—Used high pressure boilers—any size or type. Also used smoke stacks, pumps, motors, pipe, valves and fittings. Give full information, prices and location in first letter. Otto Biefeld Co., Watertown, Wis. 8-M

WANTED—Spray drying equipment to be used for drying sugar cane syrup of about 50 Brix. Will use direct fired natural gas of about 500° F. temperature. Want capacity for evaporating 10,000 pounds of water per hour. Also need experienced operator. Have chamber and really need direct spraying equipment as rotating plate or pump and nozzle. Communicate directly with A. R. Wurtele, Mix, La. 8-M

WANTED—SKIM MILK, year round; New York State plant or nearby. Plant must have facilities for cheesemaking. Box 152, care this publication. 8-M-t.f.

WANTED TO BUY—One filler for filling milk product into 14½ oz. sanitary type can, can size 303 x 406, to fill approximately 100 cans per minute. Contact James Maguire, Wyeth Incorporated, Mason, Mich. 8-M

LABORATORY SERVICE

CHEMICAL and Bacteriological Analyses of milk and its Products. Personal attention to Official Samples and Sanitary Requirements. N. Y. State Licenses. DAIRY PRODUCTS LABORATORY, 82-31 60th Rd., Elmhurst, L. I., N. Y. 8-M-3

SON TO THE STEINITZES

Dr. and Mrs. Willis Steinitz announce the birth of a son, Harold Samuel, Friday, June 20. Dr. Steinitz is technical director of American Food Laboratories, Inc., Brooklyn, N. Y.

Answers to
ARE YOU A DAIRYMAN

1. 115 degrees F. Warm enough to take off the butterfat, not hot enough to cause milk stone.
2. Calcium.
3. Samuel W. Tator whose article on level production appears in this issue.
4. Louisville. Connecticut's Level Production Incentive Plan is a modification of the famous Louisville Plan.
5. The Wisconsin Creamery Association says "If you ship f.o.b. your plant you have no further liability on the transportation. If you ship f.o.b. point of destination on a standard bill of lading you retain title until the product arrives at destination and YOU ARE RESPONSIBLE for the product."
6. Sales Not Surplus.
7. The price support offered by the Steagel Amendment lasts to the end of 1948.
8. Research funds particularly among the land-grant colleges and universities.
9. Milk stone is caused by the precipitation of calcium, sodium and magnesium phosphates by heat.
10. Bang's Disease.

ROBERT M. GANTERT

The sudden death of Robert M. Gantert, a pioneer and oldest in years employed of the sales force of Island Equipment Corp., New York, manufacturers of Unitized "Spot" Conveying Equipment occurred on June 23.

Well known in the Material Handling as well as the Bakery and Food Industries. Mr. Gantert was 52 years old.

Try Our . . . .

Weekly Statistical Review

A Careful Analytical Study of the position of Eggs, Dressed Poultry and Butter .....

By mail or by wire .... write for sample copy

Urner-Barry Company, Publishers
173 Chambers Street New York 7, N. Y.

DISA

advances, bulwarks and serves the milk and milk products industries every day in the year. Three hundred and twenty-five companies comprise it. Put your problem before DISA houses . . . They will help you.

DAIRY INDUSTRIES SUPPLY ASSOCIATION
1426 G St., N.W. Washington 5, D. C.

STABILITY WITH PROGRESS

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DAIRY COUNCIL NUTRITIONIST

Chicago, Ill.—Appointment of Miss Barbara B. Gardner, home economics teacher from Concord, Mass., as a staff member of the National Dairy Council was announced today by President Milton Hult. Miss Gardner will work out of the Dairy Council's regional headquarters in New York City. Her

Barbara B. Gardner

assignment will be to work on the ice cream nutrition program of Ice Cream Manufacturers of New York State.

GOVERNMENT PURCHASE

The Commodity Credit Corporation is interested in the purchase of 1,000,000 cases of export packed evaporated milk for delivery as soon as possible. Offers for the sale of this milk, if made subject to the terms of Announcement Da-50, will be considered weekly until the requirement is met.

Purchasers will be made, as heretofore, f.o.b. the contractors plant or warehouse but acceptances will be on the basis of the lowest cost to the Government of the milk delivered to eastern ports.

Don S. Anderson
Assistant Director
Dairy Branch

KEHOE CORP. MOVES

The Lester Kehoe Machinery Corporation announces the removal of their warehouse and shop from 15 William St., Staten Island, to 720 Richmond Terrace, corner Lafayette Ave., Staten Island. The concern's main office is still located at 1 East 42nd St., New York 17, N. Y.

OF EVENTS TO COME

California Dairy Council and Dairy Institute of California—Quarterly meetings, Eureka Inn., Eureka, California, August 20 and 21, and 22.

Western Division, American Dairy Science Association—University of California Branch, Davis, California, August 26-27, 1947.

Dairy Conference—Cornell University, Ithaca, N. Y., Sept. 4-5 Write Prof. A. C. Dahlberg.

New York State Association of Milk Sanitarians—Annual meeting, Hotel Hamilton, Utica, Sept. 18, 19, and 20.

Packaging Machinery Manufacturers Institute—Fifteenth annual meeting on October 6 and 7, 1947, at the Hotel Sheraton, Springfield, Massachusetts. George A. Mohlman, President, Package Machinery Company, East Longmeadow, Massachusetts, is Chairman of the Committee on Arrangements.

American Public Health Association—75th annual meeting, Atlantic City, October 6 to 10 inclusive.

Minnesota Creamery Operators' & Managers' Association—Annual convention, Hotel Lowry, St. Paul, October 7-8.

Wisconsin Creameries Association — Annual Convention, October 15, Northern Hotel, Chippewa Falls, Wis.

International Association of Milk Sanitarians—Annual meeting Schroeder Hotel, Milwaukee, October 16, 17, and 18. Dr. J. H. Shrader, 23 East Elm Ave., Wollaston 70, Mass., secretary-treasurer.

Wisconsin Milk Sanitarians Association—Annual meeting with International convention at the Schroeder Hotel, Milwaukee, Wis., October 16 to 18, inclusive. K. G. Weekel, president, Department of Dairying, University of Wisconsin, Madison.

Red River Valley Dairymen's Association—Annual butter contest and convention, Thief River Falls, Minn., October 21, 22.

Wisconsin Creamery Employees Association—Tentative arrangements have been made for the annual convention at Marshfield, Wis., October 21, and 22, and 23. James Ashley, Chippewa Falls, secretary.

Dairy Plant Operators and Milk Distributors Conference—26th Annual Meeting, Dept. of Animal and Dairy Husbandry, University of Vermont, Burlington, Vt., October 29-30.

Vermont Conference for Dairy Plant Operators and Milk Distributors—Twenty-sixth Annual Conference, October 29 and 30, University of Vermont, Burlington, Vt. O. M. Camburn, Director of Short Courses and Educational Conferences.

Dairy Industries Society, International—First annual meeting will be held in Miami, Fla., October 27 to November 1. For further information, address the society at 1426 G St., N. W., Washington 5, D. C., U. S. A.

International Association of Ice Cream Manufacturers—Annual convention, Miami Beach, Fla., October 27, 28, and 29.

Milk Industry Foundation—Annual convention, Miami Beach, Fla., October 30, 31, and November 1.

Dairy Industries Suppply Association—"Stand-by" headquarters during Milk and Ice Cream convention week, Miami Beach, Fla., October 27 through November 1.

Ohio Animal Nutrition Conference—Ohio State University, Columbus, Ohio, November 6 and 7.

National Cooperative Milk Producers' Federation—Annual convention, Hotel Jefferson, November 5-8.

Iowa Milk & Ice Cream Association—Annual convention, Des Moines, Iowa, November 12-14.

New York State Milk Distributors—Annual convention, Arlington Hotel, Binghamton, November 12-13.

Indiana Dairy Products Association—Annual convention, French Lick Springs Hotel, French Lick, Indiana, November 17-19.

Ontario Milk Distributor's Association—Annual Convention November 29 and 20, General Brock Hotel, Niagara Falls, Ontario, Canada.

American Butter Institute—Annual convention will be held November 19 and 20, 1947, at the Congress Hotel, Chicago, Ill. Russell Fifer, executive secretary, 110 N. Franklin St., Chicago 6, Ill.

Washington State Milk Dealers Association, Washington State Ice Cream Manufacturers Association and Washington State Creamery Operators—Annual Conclave at Vancouver, B. C., November 19-21, 1947, inclusive.

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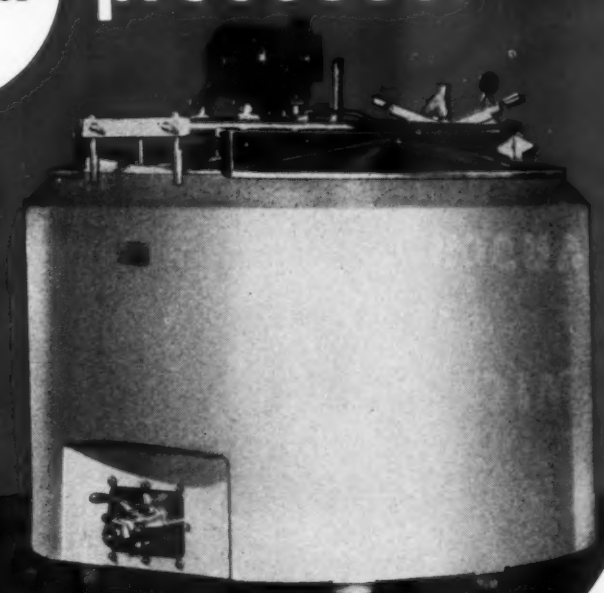

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